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ABSTRACT

Papers on science and technology library and information services presented at the 1982 International Federation of Library Associations (IFLA) conference include: (1) "The Central Subject Libraries of the Federal Republic of Germany--For Example: The Technische Informationsbibliothek Hannover" by Gerhard Schlitt and Jobst Tehnzen; (2) "The British Library Lending Division as a Central Document Supplier" by Maurice B. Line (United Kingdom), which describes the British Library's loan demand for research material; (3) "The Stock of Old Literature in the Library Network Illustrated by the Example of Mining," an examination by Dieter Schmidmaier (German Democratic Republic) of the need for library preservation of documents which show the history of science and technology; (4) "Patent Search in Special Libraries" by G. Kruse (Federal Republic of Germany); (5) "Access to Documents in Brazil: Interlibrary Loan Programme--COMUT" by Antonio Miranda; (6) "Patent Documentation Collections of the Soviet Union" by A. N. Morozov (USSR); (7) "Role of Scientific and Technical Libraries in the System of Scientific and Technical Information of the USSR" by I. M. Kharina; (8) "Supplying the Users with Scientific and Technical Information and Scientific Documents (with Special Regard to the Socialist Republic of Slovenia)" by Mara Slajpah (Yugoslavia); and (9) "CISTI: Scientific and Technical Information Services in Canada" by Elmer V. Smith. (ESR)

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INTERNATIONAL FEDERATION OF LIBRARY ASSOCIATIONS

SPECIAL LIBRARIES DIVISION

SCIENCE AND TECHNOLOGY LIBRARIES SECTION

PAPERS

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THE CENTRAL SUBJECT LIBRARIES OF THE THE FEDERAL REPUBLIC OF GERMANY - for example: The Technische Informationsbibliothek Hannover

by

Gerhard SCHLITT and Jobst TEHNZEN (Hannover, FRG)

Meeting 136
SI yes/no

Gerhard Schlitt and Jobst Tehnzen

The Central Subject Libraries of the Federal Republic of Germany - for example: The Technische Informationsbibliothek Hannover.

The German system of interlibrary cooperation for literature supply is based on two principles, both well established.

The first one is the "regional principle". The Federal Republic is divided into seven interlibrary loan regions, largely identical with the 11 states of the German Federation. Each region has a union catalogue of the major libraries of its region. This ensures that orders for a high percentage of titles requested can be satisfied within the region. A request may only cross the borderline into another region, when the union catalogue establishes that there is no record of this title in any one of the libraries reporting to the catalogue.

At first glance this seems to solve all problems. However, the proverb says that he who pays the piper calls the tune. This means that the supporting institution of a library, i.e. the university, the research institute, the industrial company etc. can expect, that its library buys titles popular within its clientele to assure high loan figures and a high satisfaction rate - and no library will bother with less-used material. But less-used doesn't mean unused!

To satisfy even low demand a second interrelated principle governs the acquisition, and therefore the supply of material: the enforcement of special subject areas or collections in German university libraries through the financial support of the Deutsche Forschungsgemeinschaft - DFG (German Research Society) (The DFG is the German association for the advancement of science. The involvement in libraries and literature provision results from the conviction that sound collections of all worthwhile publications from all over the world form an integral part of the infrastructure of any scientific effort.)

A comprehensive system was developed over many years, covering all aspects of the humanities, science and technology. Responsibility for comprehensiveness of acquisition in each subject field was delegated to some 30 university libraries. This DFG-Sondersammelgebietsplan (DFG Special Collections Plan) dates back to 1910. In the humanities it is still the fundamental plan for a decentralized acquisitions policy as a substitute for a national central library.

The special situation in the years following the 2nd World War, caused by the rapidly growing demand for scientific literature from outside the universities and the call for a faster delivery of this literature to meet the needs of the day, etc., lead to a profound discussion in the German library world of the 1950s.

It soon became apparent that at least in the applied sciences many improvements were overdue, and that they could be easily implemented. The deliberations culminated in the idea of concentrating a number of the so far decentralized collections into a few central subject libraries. To achieve immediate improvements for the user it was decided either (1) to attach the new central subject library to the most comprehensive collection available or (2) to improve an existing special collection or library. A second consideration was that these new libraries might be charged with new tasks, in documentation and information for example.

1. TIB Hannover - the first central subject library

The first of the present four central subject libraries was founded in Hannover in 1959: the Technische Informationsbibliothek - TIB (Technical Information Library).

Of the two ways to build up a central subject library the first one was chosen: the library of the University of Hannover, formerly a higher technical college dating back to 1831 and having a very good collection with absolutely no losses during the war, served as a basis or core. To this core the TIB was added.

Both libraries are so closely linked together that from an external view they appear united. They are housed in a building specially erected in 1965.

The internal structure shows great differences, however. The university library receives its funds from the ministry of science and art of the state Lower Saxony via the university. Being a so-called "central institution" of the university the library offers large reading rooms with 400 seats to all students and academic staff of the faculties of science, engineering, and horticulture. By a special agreement the provision of literature in humanities, sociology, economics, and law falls within the responsibility of the Niedersächsische Landesbibliothek (State Library of Lower Saxony) in Hannover.

Acquisitions are therefore concentrated on the main scientific and technical literature of the world, and a large textbook collection for students has been made, with between 5 and 200 copies of each title according to actual demand. This very highly used collection accounts for more than 60% of the loans of monograph literature. Readers have free access to these books, and together with a simplified lending procedure this helps to make future engineers and scientists "library minded". For advanced students the library offers online literature searches at reduced prices. Some 400 searches are made annually.

The TIB was conceived as a supplementary library. The addition of the TIB to the existing local library converts it into a supraregional or national library for everyone living anywhere in the Federal Republic of Germany. TIB is jointly financed by the the federal government through the Bundesministerium für Forschung und Technologie (Ministry for Research and Technology) - 30% - and the Länder (federal states) - 70%.

The TIB acquires

- less used material such as journals of a lower scientific level, generally addressed to more practically-minded readers

- non-conventional material not available from booksellers, such as single conference papers, publications of industrial companies, the very important group of research reports on microfiche from NTIS in USA, and from other official and unofficial bodies
- literature in difficult languages such as Russian, Japanese, Chinese etc.
- material on very specialized subjects.

Summarized into one phrase: the scope of the united University Library and Technical Infromation Library is engineering/ technology, as well as the basic sciences: chemistry, mathematics, and physics.

Within this broad scope the library acquires everything that is printed on paper or microfilm/microfiche, regardless of publisher, language, country, size, form or anything else.

The latest statistics show stocks of

some 19 000 current serials
about 1.6 million bound volumes of monographs and periodicals
380 000 reports in microform
250 000 dissertations
80 000 volumes of conference proceedings

The total staff is 214 (TIB : 141; UB: 73).

Both libraries together handled 800 000 requests in 1981 (not counting the consultation of books and periodicals in the reading rooms). 400 000 requests came from about 16 000 local users, mostly students, and may be credited to the university library.

The other 400 000 requests came from outside Hannover and should be credited to the TIB. These requests, arriving at the library in an average daily stream of 1 600, originate from two main sources:

1. the interlibrary loan service of public and scientific libraries, which are officially allowed to participate in this service. For the time being this service is free of

of charge. Discussions are under way, however, to change this.

2. direct requests from industry, research institutes, official institutions, private persons etc. For this direct use, special TIB request forms are sold at DM 10,- per form, each form valid for one title (European countries DM 13,-, overseas DM 15,-). This price covers the cost of processing the request, including postage etc.

Why this distinction?

The explanation goes back to the basic principle of "regionalization" mentioned before. In practice this means that a publication has to be requested from a local library. If no local library is able to provide it, a local library with permission to participate in the German interlibrary loan service sends a request to the regional union catalogue. The union catalogue in turn either passes the request to a library within the region or to the union catalogue of another region and so on. The more stages the request has to go through, the more time elapses. When the requested publication finally arrives it may be much too late. The average time taken from the day a request is posted until receipt of the requested publication is 24 calendar days or roughly speaking one month.

Everyone may now avoid this cheap but uncertain and slow process by sending a request form direct to the TIB, if the requested title falls into the TIB's scope.

The overall satisfaction rate for this direct service lies between 85% and 88%. 92% of the requests satisfied refer to articles in periodicals, conference proceedings etc. and are supplied as photocopies. About one third of the photocopies is mailed the day after receipt in TIB and will reach the client three days after he has posted the request. For technical reasons the other 2/3 have to be microfilmed, reenlarged on paper with Xerox Copyflo machines, cut, collated and dispatched. Including postage in both directions the general turn-around time for this method is 10 to 12 days.

For the time being there are no improvements to be foreseen,

as there are no suitable machines available. Office copying machines are only of limited value, especially in handling bound volumes. But the installation of more copiers is not the main problem, it is their operating staff that causes headaches: there is a general and complete freeze on the employment of any additional staff.

Because a g e n e r a l reduction in delivery time cannot be achieved, the TIB offers an option for "rush orders". Urgently needed publications may be ordered by telephone or telex. These requests are processed immediately and dispatched the same day. As the German Bundespost is quick and reliable in the delivery of letter post, the client generally receives the document the next day with the morning post.

Two years ago, the TIB started a rush order service called TIBORDER. In connection with a search in a DIALOG database in the United States the relevant references may be transferred to the DIALOG online order file DIALORDER. Each morning TIB calls for new orders. They are handled immediately like all other rush orders. The number of this type of request is slowly but continually rising and now lies at about 7 per day with peaks of more than 70. The price for all rush orders is double the charge for ordinary orders: DM 20,- within Germany, DM 26,- for other European countries, and DM 30,- for overseas countries, such as the US or Japan. In June 1982 a contract has been signed to extend this service to the ESA IRS database online order service PrimorDial.

As far as the budget allows, the TIB buys wholesale, i.e. all publications of the American Society of Mechanical Engineers or all volumes of a serial with more than 50% of all titles relating to science and engineering. The TIB also tries to acquire everything requested by readers: single papers reports of all kinds, published or unpublished, pamphlets etc. etc. This policy also relates to material from the Eastern language countries: Soviet Union, Hungary, Poland and so on, as well as Japan and China or India, Korea and other countries of this hemispere. The result is an intake

of many publications never abstracted in any abstracting service.

Close cooperation with German information and documentation centres tries to turn this unknown or "grey" literature into well known and available conventional literature. Abstracting of this special kind of literature is combined with the reference "Available from TIB Hannover".

Cooperation works in both directions: Agents of German I&D centres are full-time guests in the TIB. They have access to all newly acquired non-conventional material, provided that they don't delay the normal office routine. They do not deal with conventional literature because this material is needed immediately after receipt for the library's clients. Readers have many sources for quick information, such as current-contents-services etc. The first duty of a central subject library is the provision and prompt delivery of bibliographically known publications, no matter where or how this knowledge originates. Everything that might interfere with this main task is of secondary importance.

"Of secondary importance" naturally doesn't mean "unimportant". Otherwise the TIB wouldn't have a special department for information and documentation of Eastern language literature. Here there are a number of specialists in several scientific and engineering subjects with knowledge of one or more of these Eastern languages, as well as an even larger number of free-lancers writing abstracts in German and/or English. These abstracts are passed to German I&D centres for publication and storage in their databases. In cases where there is no such centre the TIB publishes tables of contents and abstracts in one of the 10 subseries of its information bulletin "Ostprachige Fachliteratur" (Eastern languages special literature). A separate edition for Japanese literatur is in course of preparation.

Quite often very interesting papers are announced but cannot be read because of the language of the paper. To remove this barrier the TIB acts as a national translations centre and is

closely connected with the International Translations Centre in Delft, Netherlands. Due to recent budget restrictions it is no longer possible to order translations to be made on the user's application and at TIB's expense. The TIB can only refer to known translations or pass the order for a translation to a translator, when the applicant is ready to pay the full costs. A compromise between what can be done and what clients want TIB to do is the "short version translation". This is more than an abstract and less than a full text translation. The price is only a fraction of that of a complete translation and the shortened text gives many more details than an abstract.

The last special service to mention here is the acqusition and announcement of unpublished German research reports. With the support of all public authorities subsidizing research projects in Germany, the TIB acts as a central depository library for all reports that remain unpublished and are not intended for publication as a book or a paper in a journal. Some 4 500 to 5 000 such reports are announced annually in the bibliography "German research reports in science and technology". TIB here works in close cooperation with the Fachinformationszentrum Energie, Physik, Mathematik (Special I&D Centre for Energy, Physics, and Mathematics) in Leopoldshafen near Karlsruhe. This centre is charged with the responsibility for report literature on energy of all kinds, and makes a special contribution to the bibliography. This year the two parts have been merged into one unit. Since 1980 the references have been fed into the European central database for unpublished literature SIGLE (System for Information on Grey Literature in Europe).

This leads to possible future developments.

Available space for storing acquisitions in the present building is completely exhausted. Several departments of the library have already had to be evacuated into a rented building some twenty minutes from the main library. The unfavourable consequences of such measures for office routine and internal cooperation are only too well known.

After careful consideration and a detailed "TIB Planning Report" all experts concerned have come to the conclusion that the two libraries, the university library and the TIB, must be separated.
The main reasons are:

- the present building cannot be extended; neither the construction of the building nor the municipal planning officials will allow this
- the university library as a central service institution has many tasks,such as the creation of a university union catalogue, the installation of departmental libraries from stock of the university library etc. that are in conflict with TIB's supraregional supply of literature with a minimum delay of time
- the TIB is mature; there is no longer any need to have the established collection of an old library as a basis; most requests are for publications of the last 10 years (nearly 90%); only a few gaps have to be closed in each library to put them both on their own feet
- the future development will be increasingly different for both libraries: The TIB has carefully to observe online ordering from databases, publishing on demand, new plans for document delivery of full texts by or for publishers, telefacsimile transmission etc. The university library, however, will concentrate its activities on information and literature searches for university staff and students, will have to become more involved in the administration of faculty and department libraries and so on.

A final separation of the TIB from the university library will need some time. No one knows when what will happen. Meanwhile detailed planning is going on.

2. The other central subject libraries

The TIB conception very soon proved to be a success. While in the United Kingdom the then NLL (National Lending Library for SCience and Technology) gradually incorporated further subjects until it finally becam the British Library Lending

Division, covering all subjects, Germany pursued the way that began with the TIB and extended existing libraries or collections.

Next to the TIB in size and success is the Zentralbibliothek der Medizin (Central Medical Library) in Köln. Based on the library of the medical faculty of the Cologne university it developed quickly. The main statistics for 1980/81 are

6 400 current serials
570 000 bound volumes of monographs and periodicals
450 000 requests
staff: 70.

The rate of success is as high as in Hannover with 85% to 88%. While 200 000 requests are from university staff and students, some 250 000 come either via the interlibrary loan service or directly on the library's special request forms. The former close cooperation with the TIB by acknowledging each other's direct request forms had to be suspended recently and changed to a one-way direction. Although the Central Medical Library is financed in just the same way as the TIB, it has proved impossible to maintain an identical price table. While the TIB is under supervision of the state of Niedersachsen (Lower Saxony), the medical counterpart in Cologne is under the administration of the state of North-Rhine/Westphalia and has, alas, different (lower) prices!

There is a close connection with DIMDI, until recently the German representative of MEDLARS. As MEDLARS is based on the comprehensive collection and acquisitions of the National Library of Medicine in the United States there is no need for any supplementary activity in information and documentation.

Located not very far from the medical library in Cologne is the Zentralbibliothek der Landbauwissenschaft (Central Agricultural Library) in Bonn. Originating from the agricultural branch of the university library its progress was extremely slow, suffering from lack of space for more than 15 years after its foundation in 1962. Although the library

holds some 270 000 volumes and some 3 200 current serials there is a staff of only 21 and not more than 20 000 requests from outside are received in a year, mainly via the inter-library loan service. The library is financed via the Bonn university library with substantial support from the Deutsche Forschungsgemeinschaft. There are no special request forms for direct ordering.

Much more important is the Zentralbibliothek der Wirtschafts-wissenschaften (Central Library for Economic Sciences) in Kiel. This library is part of the famous Institute for World Economics. Both the institute and its library are financed as supraregional institutions by the Federal Government and the federal states.

This library plays an active part in documentation by publishing the "Bibliographie der Wirtschaftswissenschaften" (Bibliography of economic sciences) and a printed catalogue card service.

The library is part of an institute. In practice this means that the director of the institute has a particular influence in the further development of h i s library.

There are no special request forms for direct ordering.

In spite of the name, the library is mainly restricted to world economics and the science of economics, just like the institute. Industrial economy is covered by a special subject collection of the Cologne university library.

The main statistics for 1981 are

18 500 current serials, mostly annual reports from commercial and industrial enterprises
1,5 million bound volumes
113 000 requests (22 500 coming from outside)
70% satisfaction rate
staff: 133

In the German Federal Republic there has been a continuing

discussion in recent years on further improvements in inter-library loans, either by establishing a central national lending library covering all aspects of knowledge, as does the British Library Lending Division, or by concentrating the many remaining special subject collections into a few further central subject libraries. The trend has been in favour of a careful concentration. The main reasons are (1) that the Länder (states) have cultural autonomy and are independent in this respect, which makes it very difficult to pursue and to realize ideas of centralization, (2) that apparently the humanities cannot be treated like science and technology, and (3) that there is no money for any change. The last argument is convincing.

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Division: Special Libraries
Section: Science and Technology Libraries

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THE BRITISH LIBRARY LENDING DIVISION AS A CENTRAL DOCUMENT SUPPLIER

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The collection and the demand on it

Although the British Library Lending Division is universal in its subject coverage, and is thus not confined to science and technology, in practice a high proportion of its stock and of the demand it receives is in science and technology. The reasons for this are simple. Most interlibrary loan demand is for research material. Most research carried out in most countries is in science and technology, and most published research literature is in science and technology. Science and technology accounted for 38% of the 48,000 new books, 74% of the 56,000 current journals, and 85% of the 120,000 reports we received last year (1981-82). However, since science and technology journals are on average much larger than those in other subjects, the number of science and technology articles must constitute about 85% of the total number of journal articles acquired each year.

The above figures are estimates: precise calculations are impossible because stock is not classified but shelved mostly in alphabetical order by title (in the case of reports by report number). It is however known that 67% of all demand is accounted for by science and technology: 74% of demand for journals, 38% for books. Of the top 500 journals in order of demand, 488 are in science and technology; of the top 1,000, 935. In terms of actual volume of demand for science and technology, the Lending Division dealt with 1,800,000 requests last year - 1,413,000 for journals, 215,000 for books, and 172,000 for other categories of publication, mainly reports.

Over all categories of material, 55% of demand in science and technology is for literature published in the last 4 years, 73% for material published in the last 9 years, and 90% for literature published in the last 20 years.

By any standards, therefore, the British Library Lending Division can claim to be a major resource of science and technology literature of all kinds. There is naturally a bias towards English language material, because 88% of all demand in science and technology is for English language items. However, while journals and reports are acquired irrespective of language, the aim being to have as comprehensive a collection as possible, nearly all books acquired in advance of demand are in English as a matter of policy, because the demand for books in other languages is very small. Foreign language books are acquired in response to demand if they are in print and not easily available elsewhere in the United Kingdom.

Acquisition policy

The stock has been built up on several principles. In the case of all but books in foreign languages, and special categories of material such as the official publications of other countries, an attempt has been made to be comprehensive, though not exhaustive, in acquiring material over a certain level. That is, books for school children or for very popular reading are not acquired, except occasionally in response to demand. The reason for this policy is of course that nearly all interlibrary loan demand is for 'serious' reading; moreover, it is much easier to justify spending government money on supporting research and development than on satisfying demands for leisure reading. In addition, items are bought in response to demand when they are not already held; quite often our first knowledge of the existence of a new journal is when we receive a request for it, and the same applies to books and reports.

The effect of this policy is that a limited proportion of stock receives very high use. The fact that nearly all of it is available in other libraries in the UK is largely

irrelevant, since it is usually in demand in them also and they cannot therefore supply it easily or quickly on interlibrary loan. The purchase of this stock is justified by the speed with which we are able to supply it and the very low unit costs resulting from the heavy demand.

This heavy concentration on a limited proportion of stock means that a large proportion of stock receives very little use. The justification for this is quite different. Much of this stock is not held anywhere else in the UK, and it is much simpler and cheaper to acquire it comprehensively in one centre than to try and find out whether it is available elsewhere, let alone try and ensure that it is acquired by a cooperative system. This means that the Lending Division stock greatly extends the UK's national library resources, and at the same time enables other libraries to concentrate their acquisitions on the material their users most need - and also to discard journals and books when their use has declined to a level where the cost of their retention becomes hard to justify.

Satisfaction rates

Over all subjects and categories of material, the proportion of requests that can be satisfied from stock is 86%. It is higher in science and technology, partly because a higher proportion of demand in science and technology than in other subjects is for journals, where the collection is strongest, partly because most demand is for recent material, so that gaps in back runs are of less significance, and partly because demand is heavily concentrated on a limited number of journal titles, very little falling on obscure or fringe journals (as it sometimes does in the social sciences and humanities). For scientific and technical journals, therefore, the chances that a request will be satisfied from stock are about 95%. The success rate for report literature is less high, because some requests are for reports that are

obscure or even classified and unobtainable. Books present a bigger problem still, because it is impossible to anticipate the titles that will be most in demand, and consequently waiting lists develop for a significant proportion of books. Since most heavy demand is fairly short-lived, it is not usually worth ordering extra copies unless they are obtainable very quickly.

Design of system

The whole system has been designed to be as simple to operate and use as possible. As mentioned above, the stock is mostly in alphabetical order by title, enabling most requests to go straight to the shelves. Requests are checked in catalogues only if they cannot be found in the shelves, and the catalogue records themselves are very simple and cheap. Filing, incidentally, is by author's surname and then title: author's initials are ignored, as are varying forms of names such as Smith and Smyth.

The building and equipment are also designed for rapid service. There is an electric system for delivering requests to appropriate parts of the stores, and a mechanical system for delivering books and photocopies to the packing bay. No records are kept of loans apart from a copy of the request form put on the shelves in place of the item lent. These simple systems, which depart from standard library practices in various ways, are essential to enable us to handle on average nearly 11,000 requests every working day. The average time that requests remain in the system is between two and two and a half days for both books and journals. 50% of requests are dealt with within two days and 75% within three days. Some requests are dealt with the same day as they arrive.

The Lending Division as a national resource

As a result of the acquisition policy stated above, the Lending Division is recognized as the de facto basis of a

national acquisition policy, around which other libraries in the country can plan their own acquisition and retention policies. In fact, we accept material disposed of by other libraries, and add it to stock if we do not already have it, so that we also serve as a de facto national repository. It should be made clear that the United Kingdom has no official stated national acquisition policy or national retention policy, but in practice we have a much more complete and adequate one than most other countries.

The Lending Division receives 78% of all interlibrary loan demands made by British libraries: 90% of requests for journals, 62% for books, and 59% for other forms of material. These figures are for all subjects; the proportions are certainly higher for science and technology, but it is not known how much higher. Almost all academic and special libraries turn first to the Lending Division for almost all materials. For public libraries the Lending Division is normally a second resort, after the regional systems, but a relatively small proportion of demand from public libraries is in science and technology, and in any case about half of all demands on the regions cannot be satisfied by them and are passed on to the Lending Division.

The satisfaction rates reported above are high, but the Lending Division does not rest content with supplying items from stock. It is also the national centre for interlending, and holds the main union catalogues in the country. In the case of books, only 56 carefully selected libraries now contribute to the main union catalogue, but in addition there is a national catalogue on computer output microfilm of holdings of libraries that are members of the nine regional systems, mainly public libraries, recorded by ISBN. When the Lending Division cannot find an item in its own stock, it provides the requesting library with a location or locations to which it can then turn. In the case of journals, the old

British Union Catalogue of Periodicals was discontinued two or three years ago, because it was no longer necessary or justified in the view of the Lending Division's stock and performance. However, the Lending Division can when necessary turn to the British Library Reference Division, notably its department the Science Reference Library, and also to other major collections such as the British Museum (Natural History), the Science Museum Library and Cambridge University Library. The British Union Catalogue of Periodicals is still used to locate some older items, but it is very rarely necessary to use it for this purpose in science and technology because when the National Lending Library for Science and Technology (which combined with the National Central Library in 1973 to form the British Library Lending Division) came into being it took over most of the excellent holdings of the Science Museum Library, so that it has an outstanding collection of older as well as recent scientific and technical journals.

Requests can be received in several ways. The postal system is still the most popular form, but Telex is used for about a quarter of all requests. Most Telex requests are received on paper tape and converted by our minicomputer into our standard forms for easy processing. Another method of requesting which is in its early days is direct by computer. It is expected that this method will increase in popularity, and possibly supersede Telex in the next few years. Finally, for especially urgent requests the use of the telephone is permitted, but a double charge is made for this.

Requests are accepted only on our own standard forms, which are bought in packets of 50 or 20. This greatly reduces invoicing and accounting costs, and cuts out all accounting transactions at the requesting and despatch stage. The form currently costs £1.75, and is valid for either a loan or a photocopy of up to 30 pages; for each additional 10 pages, a

coupon has to be added, but only very few requests require this. For items that cannot be supplied by the Lending Division, the form is returned to the requester, who can either return it with other unsatisfied requests at intervals for replacement by a new form, or use it for sending to another library, which can likewise trade it in, thus in effect being paid by the requesting library.

Items are despatched either by first class mail, or, for nearly half of all despatches, by road/rail transport schemes. These are cheaper than the postal system, but do not extend to all parts of the country.

The Lending Division as an international resource

As well as receiving 2,161,000 requests from British libraries last year, the Lending Division received 525,000 requests from abroad. The National Central Library had always had an international loan service, but the real growth of foreign demand began when the NLLST began to supply foreign as well as British libraries in the late 1960s. The growth of demand since then is illustrated in Figure 2. The picture has been one of consistent and fast growth until two years ago, when there was a dip; demand picked up again last year, though not quite to the level of 1979/80. Foreign demand now represents 20% of all demand. Science and technology material accounts for a higher proportion of foreign demand than of British demand - probably about 72% compared with about 65%.

The reasons for this enormous growth appears to lie mostly in the adequate lending services of other countries. Some countries have reasonable cooperative interlending systems, but few of them appear to be able to compete for speed or probability of satisfaction with the Lending Division, and some countries seem to have little or no interlending system at all.

The service is a truly worldwide one. It has 5,123 users in 122 countries. Unlike the UK service, which can be used only by organizations, individuals in other countries can use the photocopy service, although most users are in fact libraries or other organizations.

The International Loan service attracted 29,000 requests last year, the highest yet recorded. Libraries are encouraged to go through national centres, but many countries do not have such centres, and we are prepared to be reasonably flexible. Most loan demand comes from Western Europe, the three largest users being France (12%), Denmark (9.5%) and the USSR (9%).

The International Photocopy Service is on a far larger scale. 497,000 requests were received last year, and the geographical distribution is quite different. Only half of the requests came from Western Europe, and relatively few from socialist or developing countries, for the same reason - lack of hard currency. The largest user was the USA (12%), followed by France (10%), Japan and Spain (both 8%), and Belgium (6%). The Nordic countries together accounted for 13%. Other heavy users were Italy and South Africa (both 4%) and Brazil (3%). These figures are for requests in all subjects, but it is unlikely that the pattern would be very different if only scientific and technical requests were considered.

No complete figures are available, but a study carried out on contract to Unesco two years ago estimated that the total number of all international loan and photocopy transactions in the world was around 1 million [(1)]. Even if this is a slight underestimate, it seems likely that the Lending Division is dealing with about half of all international requests.

No distinction is made at the Lending Division between British and foreign requests for purposes of processing. The

time taken to process is much the same (if anything, it is slightly shorter for foreign requests). The main difference is that the Lending Division does not normally pass foreign requests on to other libraries if it cannot supply them from its own stock, except in the case of British material, where it accepts a responsibility for trying to ensure that requests are satisfied if at all possible. For the same reason, it will lend British books abroad when it might be reluctant to lend American or other English language books on the grounds that they were likely to be in demand in the UK. This means that a foreign library has a smaller chance of success when applying to the Lending Division for a recent American book than a British library has.

Requests are accepted on standard forms. In the case of the International Loan Service, the forms are bought in advance, in the same way as in the UK; forms are bought in packets of 20, the current prices being £2.25 per form in Europe and £5.00 per form in other continents. In the case of the International Photocopy Service, standard forms are used, but have in themselves no value. Instead, photocopy coupons are bought in advance, and one coupon has to be used for each 10 pages or part thereof of a photocopy. The current price is £2.20 per coupon. (The reason incidentally that charges are made per unit of 10 pages rather than per page is that the main bulk of the cost is in the retrieving, packing and posting, and the cost does not differ greatly whether the article is one page long or 10).

As with the UK service, requests are received by mail, Telex or computer. In the case of Telex and computer requests, users place a deposit account with the Lending Division, and the appropriate amount is deducted each time an item is supplied. With the International Packet Switched Service, computer requesting becomes considerably cheaper than the use of Telex, and should increase rapidly. Links have been

established with bibliographic retrieval services such as BLAISE ADRS, Lockheed DIALORDER, and SDC Orbit Maildrop. Similar links will be sought with other database hosts.

All items are despatched by the fastest method possible. In the case of most countries, this means airmail.

Conclusion

As will have been seen, the Lending Division is a very simple solution to document supply. No complex national acquisition policy is needed in the UK, nor is much cooperation required from other libraries in interlending. The fact that interlending is almost its sole function means that it can be designed specifically for the purposes of fast retrieval and supply. However, it should be noted that the comprehensive acquisition policy, and its associated costs, can only be justified because the volume of interlibrary loan demand in the UK is very high. This particular model would therefore not be applicable to most other countries, although some degree of centralization could well be considered.

(1) Line, M B and others. The International provision and supply of publications. Paris: Unesco, 1981. (PGI-8/WS/30).

Inter-library loan demand

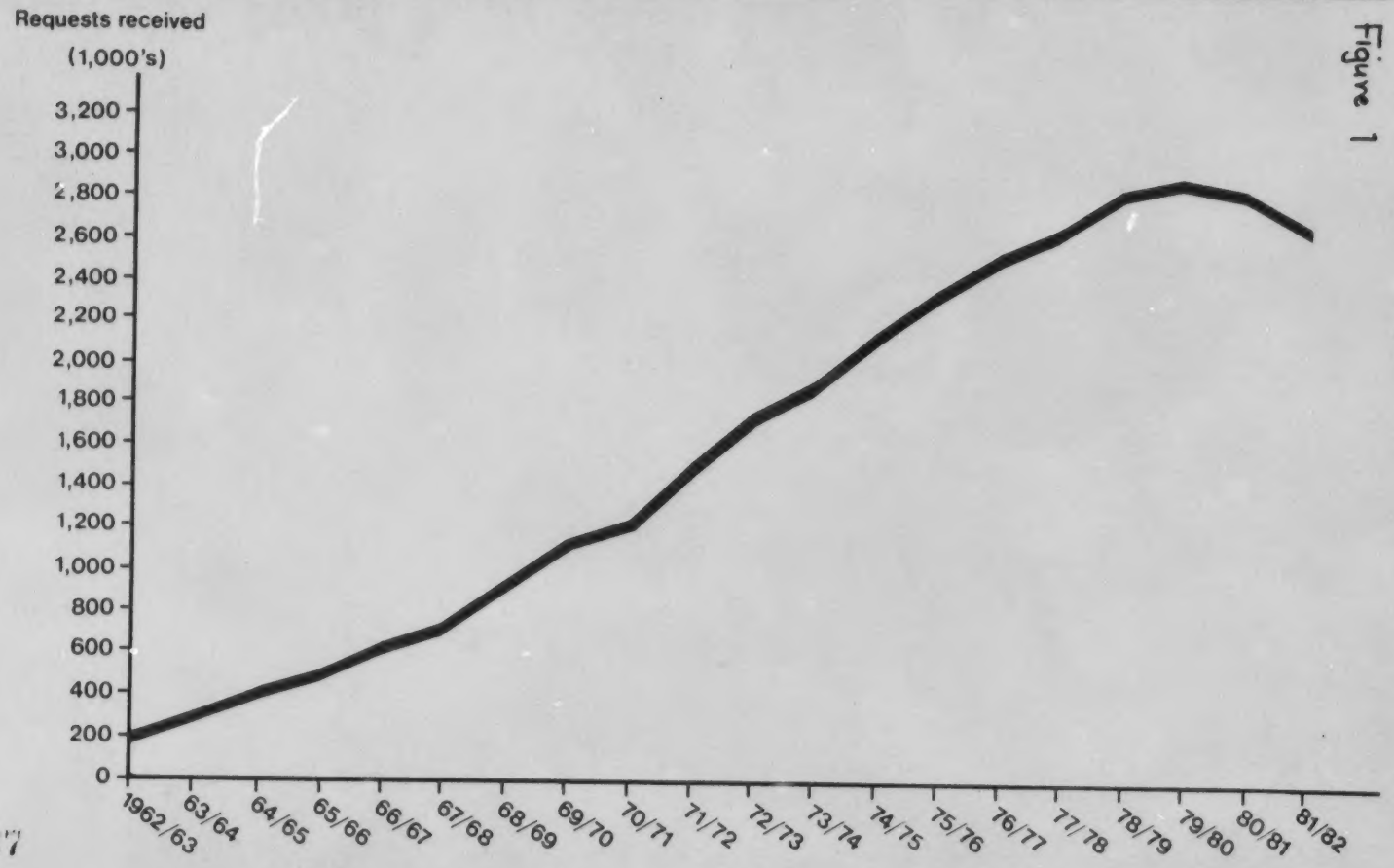


Figure 1

Overseas demand for photocopies

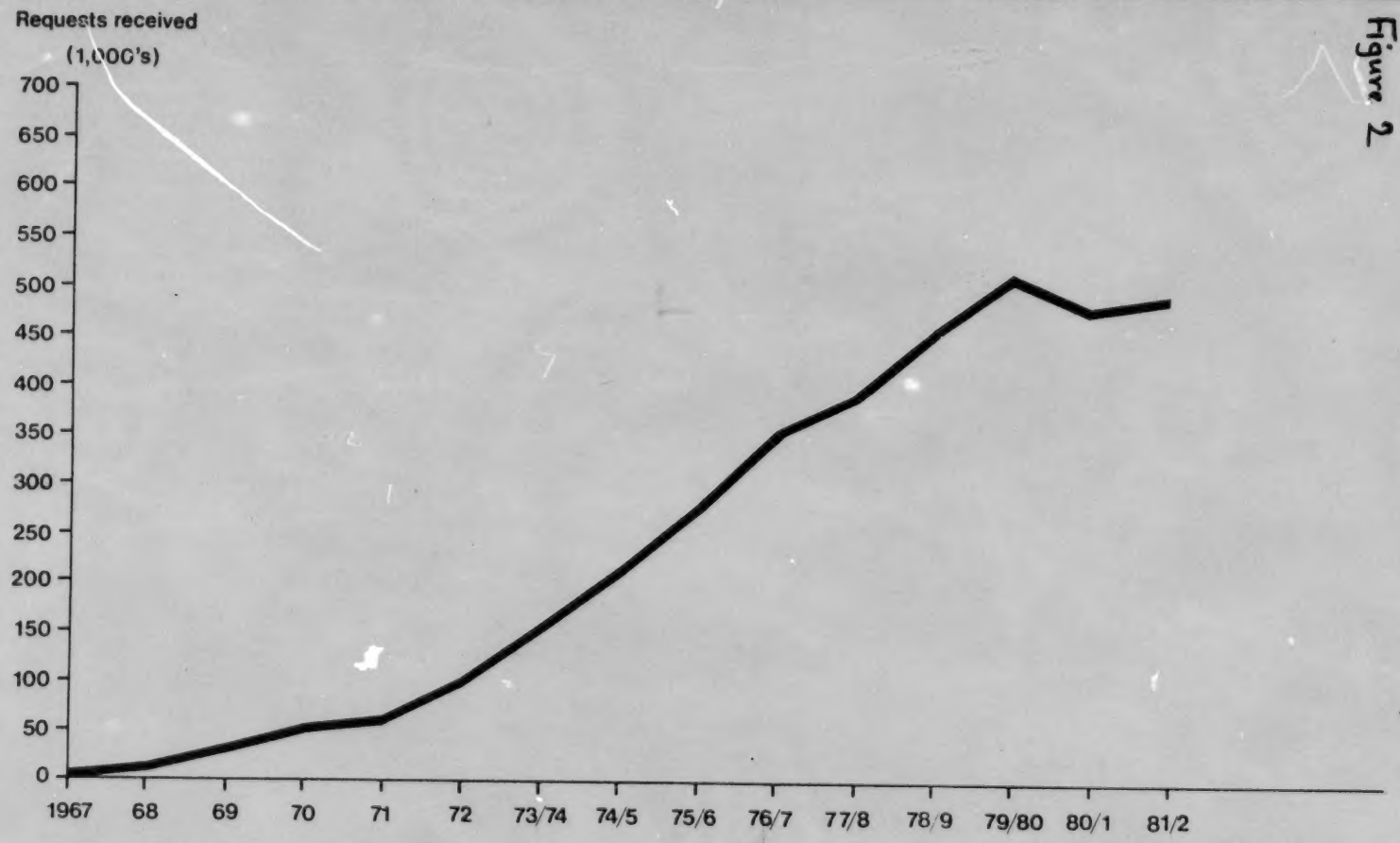


Figure 2

Requests received at BLLD

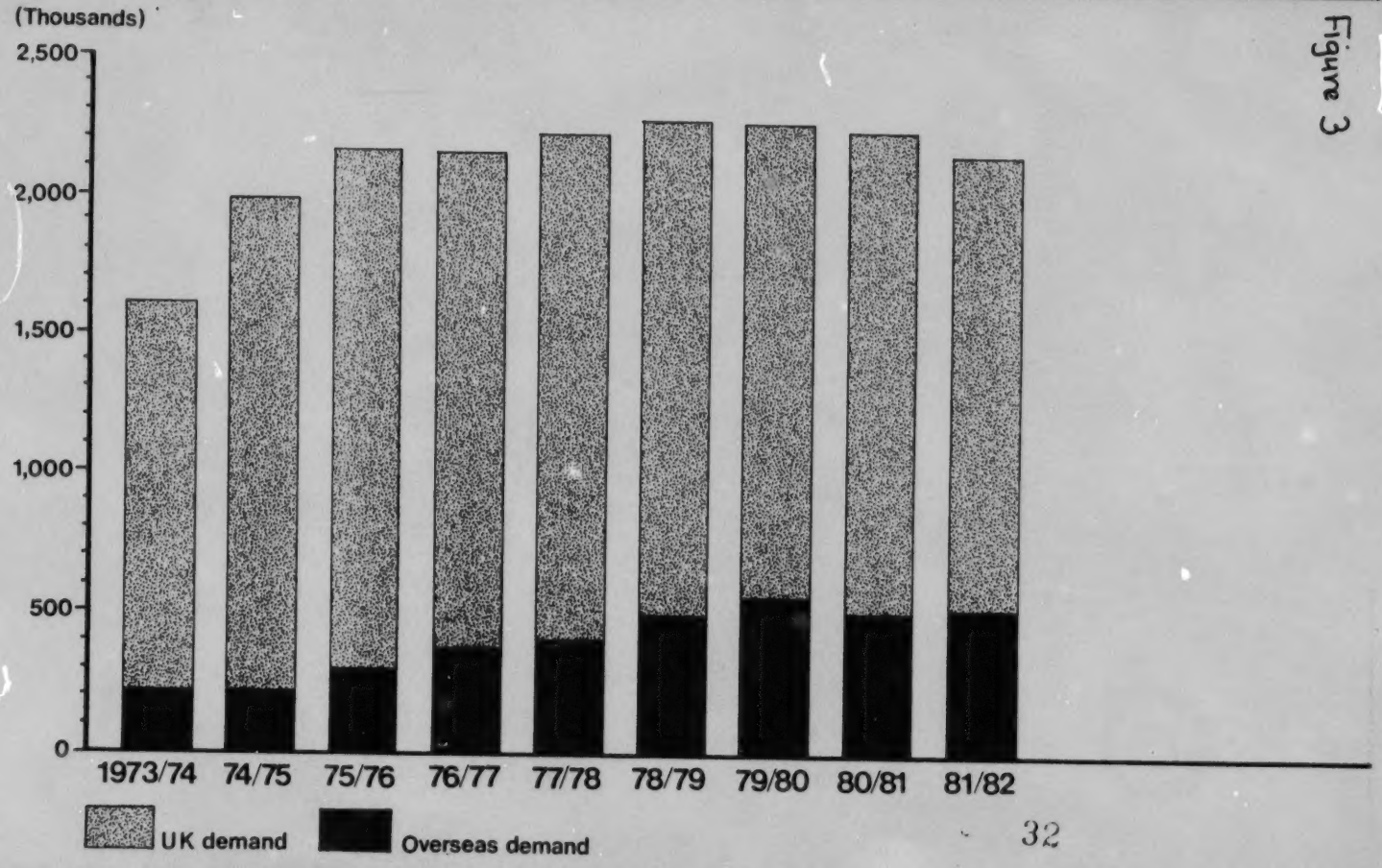


Figure 3

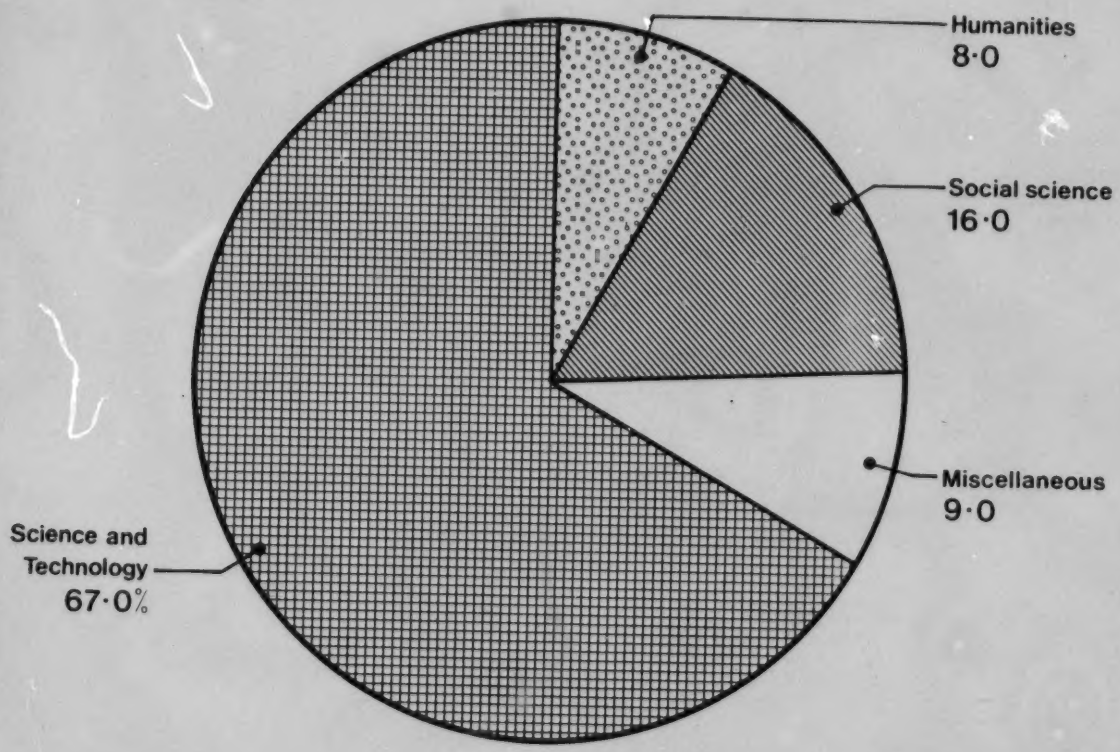
Statistics of stock and intake

Figure 4

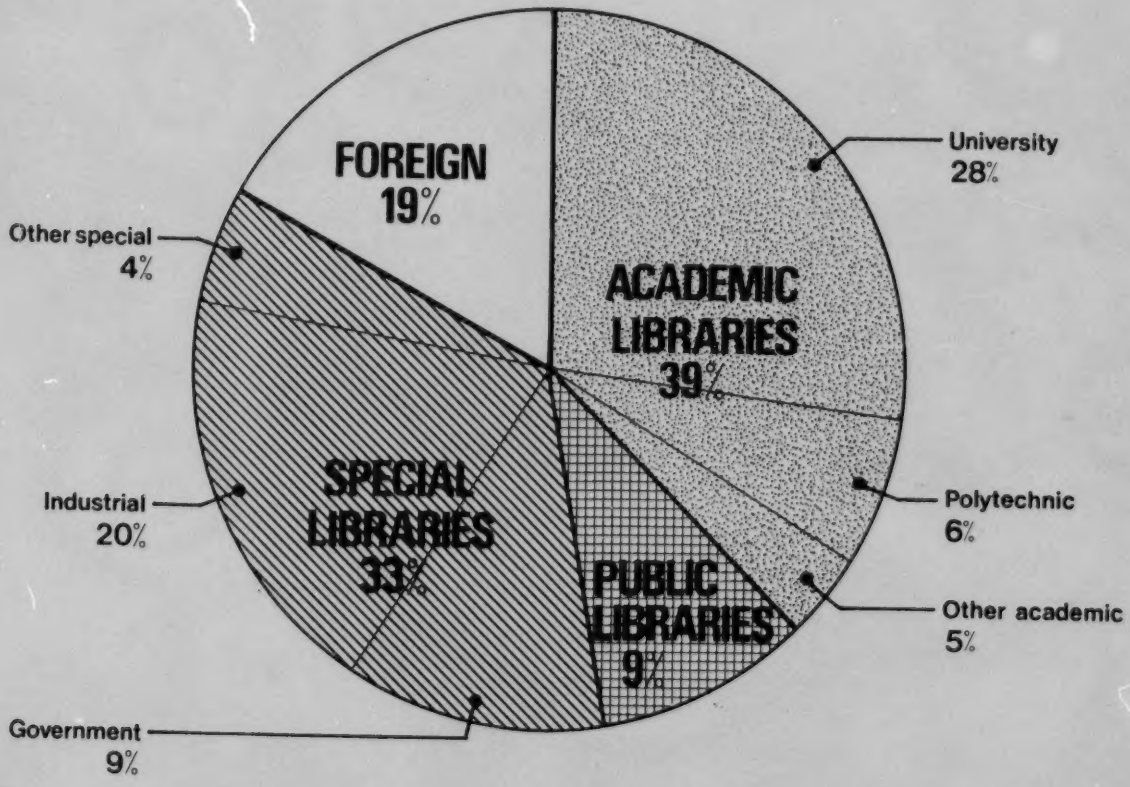
	Holdings	Annual Intake
Serials	**157,000** titles	**56,000** titles
Monographs	**2,360,000** volumes	**90,000** volumes (including donations)
Reports in microform	**2,275,000**	**120,000**
Dissertations	**379,500**	**9,500**
Music	**60,000**	**8,500** (including donations)
Conference proceedings*	**148,000**	**19,500**
Translations*	**473,000**	**11,000**

*Figures relate to items indexed: many of these items are included also in other categories.

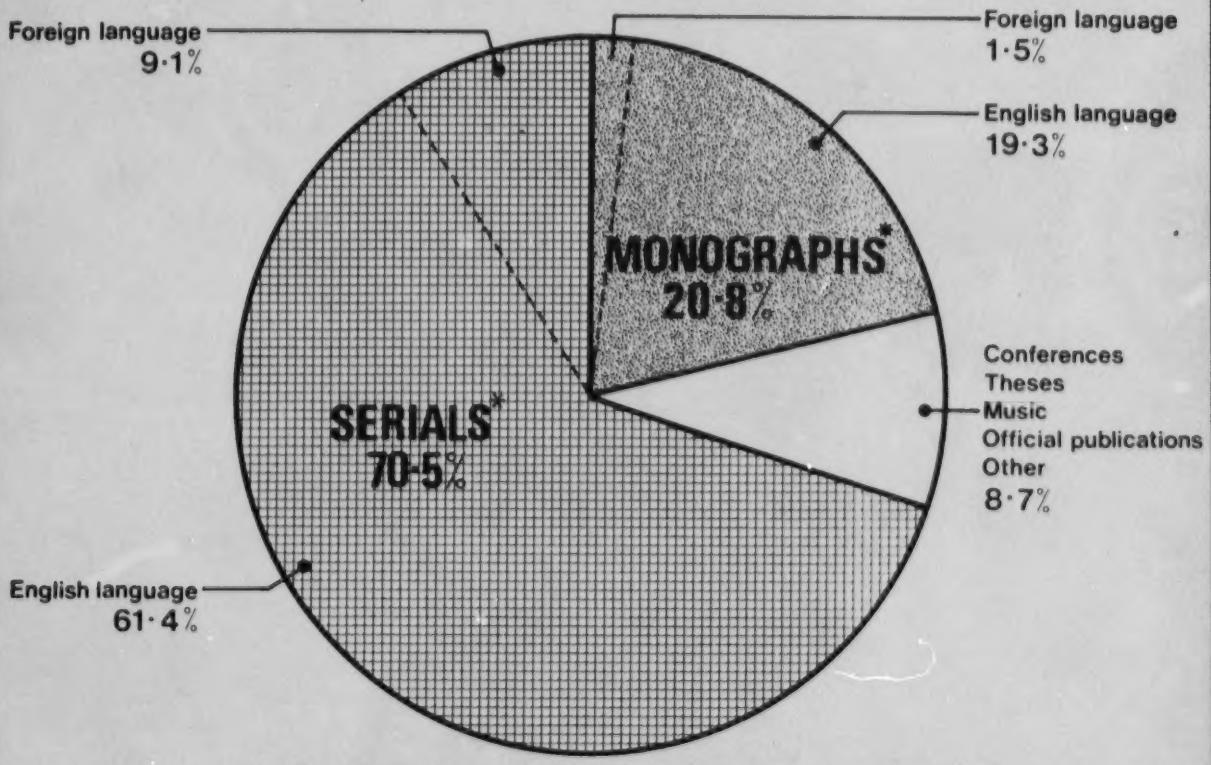
Subjects of material requested



Sources of requests



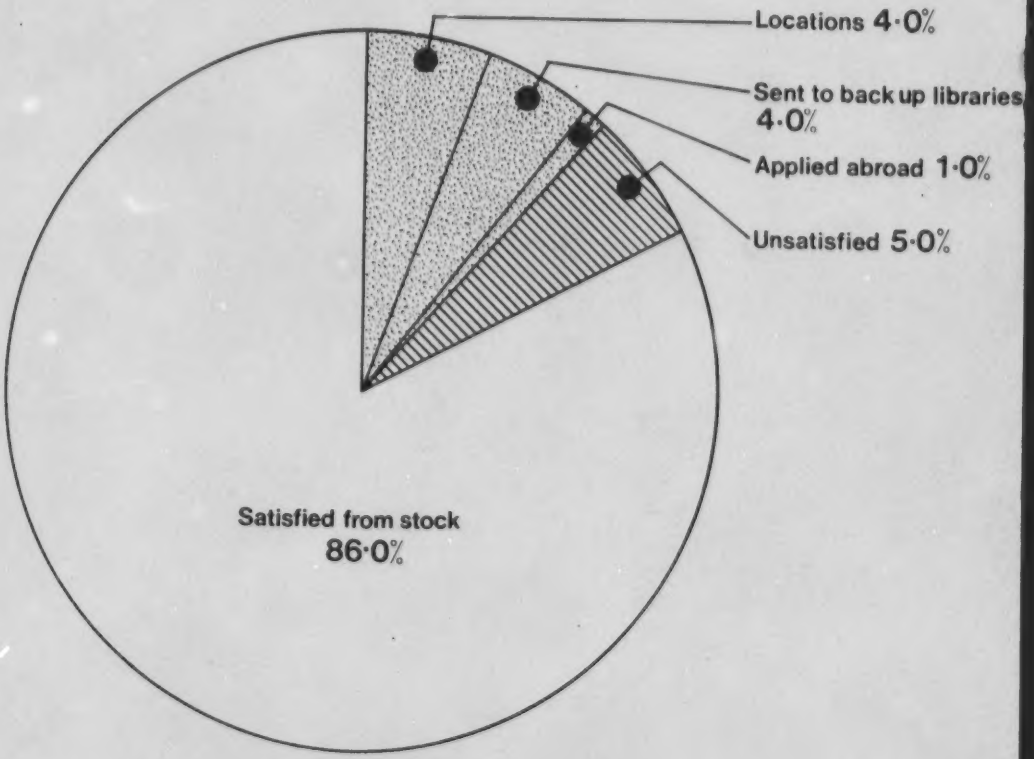
Forms of material requested



* including monographs in series and reports (serial)

* including reports (monographs)

Satisfaction rate (excluding returned requests)



réseaux
48e conférence générale de l'IFLA – Montréal
22-28 août 1982
Fédération internationale des associations
de bibliothécaires et des bibliothèques

networks
48th IFLA General Conference – Montréal
August 22-28, 1982
International Federation of Library
Associations and Institutions

1982

71/SCIE/4-E
136-CS

IFLA
Montreal 1982

The stock of old literature in the library network illustrated by the example of mining

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At all times libraries have functioned as guardians of the cultural heritage and have preserved the literature of past centuries for future generations. This was often left to individual initiatives and was done sporadically and one-sidedly and only in a few institutions. To change this generally unsatisfactory situation various states have laid down legal regulations. Particularly generous and far-reaching regulations have been put into force in the socialist countries. The "Kulturschutzgesetz" (a law for the protection of cultural assets) is binding on cultural institutions in the GDR[1]. The term "cultural assets" is defined more exactly in an implementing regulation[2]. A National Council for the cultivation and propagation of the German cultural heritage is responsible for the creative implementation of the decisions of Party and government concerning our cultural heritage[3]. All these regulations include and take account of GDR libraries.

The responsibility of libraries for preserving, cultivating, and propagating our cultural heritage caused the library association of the GDR to hold a special conference in January 1981 at which ideas, information and reports from libraries, museums, publishing houses, literary-scientific societies and special councils were presented. The materials

of this conference, which also roused great interest abroad, show the complexity and variety of the problems of cultivating the national heritage and the new demands facing a socialist cultivation of our heritage in the libraries[4]. The theoretical studies and practical results also extend earlier definitions considerably: The conference formally extended the national cultural heritage to all kinds of sources of information and leads it chronologically right into the 20th century. Happily, the upper restriction of the definition of old valuable books to the 18th century is also dispensed with.

The libraries are in accordance with the provisional categories of literary documents belonging to the national cultural heritage:

- the proletarian-revolutionary heritage up to and including the antifascist and democratic literature in the eastern part of Germany
- the works of world literature in first and early editions
- manuscripts
- works from which the development of the productive forces can be derived
- literary documents distinguished by their rarity, appearance, binding and typographical design

Since the legal regulations of the GDR do not make a distinction between different types of libraries and consider all kinds of literary documents, the scientific and technical libraries are also required to formulate their respective position and goal. At the conference mentioned above,[5] Helmut Zesewitz made some notable contributions on behalf of the Technical Libraries section of the Library Association of the GDR, reprinted in the journal " Zentralblatt für Bibliothekswesen" [6].

Cultural heritage in the scientific and technical libraries

Three initial conclusions can be drawn for the scientific and technical libraries:[4, 6, 7]

1. Cultural heritage must not be reduced to culture in the traditional sense of the word but must also include explanations of the development and history of science and technology, of the productive forces as well as of the relationship between man and the environment.
2. Cultural heritage has no time limit and is not limited to single genres of literary documents and thus also includes literary documents, which have so far not been given any consideration and which have often been summarized under the term " grey literature " .
3. Cultural heritage also means continuously examining the literary documents currently being published with a view to preserving them for future generations.

These conclusions cover only aspects concerning libraries. Among them the second point should be given special consideration by the scientific and technical libraries, because these libraries are very much associated with the "grey literature", i.e., diploma papers, theses, dissertations, research papers, conference proceedings, trade publications, standards, patents, audio-visual materials, atlases, maps and many other documents must be examined for their value as cultural heritage.

Here it is high time to add a scientific or economic viewpoint which, at least in the technical literature concerning libraries, has seldom been considered hitherto: Old sources of information play an important role in the present and future organisation of science and within national

economy. The international situation regarding raw materials and energy no longer allows the extensive forms; it demands a sensible raw material- and energy policy with the resources available. In this sense the old sources of information show the way to a better utilisation of the raw materials: new techniques make possible the mining of old slag- heaps, the re-opening of pits and the discovery of alternative forms of energy to petroleum and natural gas. Another example is given by Dieter Scheffel: "Today nobody would buy a Singer sewing-machine where you have to use a treadle, everyone prefers a modern electric one. But I know that it is a problem to produce the old machines for those countries where quite a lot of households do not yet have any power supply. It was possible to produce these machines, however, because the corresponding documents on the production of such machines were available to us, and thus a valuable market for the export of these machines could be opened up. Consequently we need this literature. Let me give another example: We are often at the end of the road with certain techniques; at the most we could workeven more quickly and more precisely, but we don't know whether these are the correct operations or not and are thus seeking new methods. You will only be successful in finding these if you look to science to answer the question: Why have we chosen this method and not another one? Or sometimes ways which were not possible before have been found in the light of new findings. We must support the scientists on their journey back. In my opinion it will be our job for the next few years to prepare this valuable bookstock so that it can and must be used as and when required."[8]

Alongside all the modern methods of information and the ever more intensive discussion about the half-life period of literature, we must make sure that our knowledge concerning the value of old literature is not lost.

Cultural heritage in library networks

Nowadays the problems concerning the cultural heritage which the librarians are faced with cannot be solved by one library or one type of library alone. Library networks are an ideal basis for taking care of the cultural heritage. [9]
They provide the following possibilities:

1. Maintenance and preservation as protection of literary monuments in the central library of the network, subject to the regulations concerning order and security
   - with possibilities for good air-conditioning of the rooms and appropriate storage and use of the bookstock
   - with different forms of preservation, conservation and restoration of the bookstock
2. aquisition as a way of updating the stock in the central library of the network from the branch libraries of the network and from second-hand bookshops to
   - supplement the bookstock
   - to close gaps in the bookstock
   - to set up new bookstocks
3. cataloguing as a way of indexing to be done by the central library of the network by co-workers trained for this purpose, to a high standard according to uniform rules for bibliographical description
   - alphabetically and systematically arranged catalogues
   - catalogues to be divided according to locality, language and classification as tools for the historian
4. research (the librarian as scholar) with research in
   - the fields of libraries, bibliography and book science
   - contributory work to the history of literature, society, economics, science and technology as well as the history of industrial enterprises

   directed and planned by the central library of the network.

5. use of books as provision offered by libraries in the form of
   - local - and inter-library lending (copying techniques)
   - references and information

   housed in the central library of the network.

6. distribution as an educational task of the libraries by broad publicity work in the form of
   - exhibitions on library premises, in traditional cabinetts and in factory museums
   - visits to libraries
   - lectures for students
   - symposia, colloquia and seminars
     facsimile editions, picture postcards, calendars and the like

   housed in the central library of the network.

Relevant points concerning work with literary documents belonging to the cultural heritage are to be included in the guide lines for setting up library networks.

The well-known fact that coordination and cooperation prevent any duplication and increase the quality of work also applies to the cultural heritage in library networks.

Cultural heritage in a library network devoted to mining

In this paper the term "Montan" is used in the same way as it is translated and explained in dictionaries and encyclopadias. In Latin

montanus[10] means : being situated -, living -, being native-, developing-, having its source in or on mountains

montana[10] means : mountainous region, mountainous, being rich in mountains

montanus[11] means : mountain-

In technical German it has taken on the following meanings:[12]

montan : mining, concerning mining and metallurgy, mining-...

mining geology : branch of geology, utilising geological knowledge for mining purposes

mining industry : mining and metallurgical plants as well as (in the broader sense) the processing industries based on mining (coal-, iron-, and steel industry).

Thus mining and metallurgy have numerous origins and common features, whereas the geosciences are not taken into account with the exeption of mining geology. In the course of the last 200 years institutions for teaching and research have been established in connection with mining and metallury in a lot of countries and today their libraries, mostly founded at the same time, have extensive stocks of literary documents. Meanwhile these libraries have often come to have a central function in acquisition, cataloguing, supply, and storage of literature. They are also obliged to preserve the cultural heritage of literary documents in mining according to tradition and to their role.

The "Georgius Agricola" library of the Mining Academy of Freiberg /GDR (member of the Library Association of the GDR and of the International Association of Technological University Libraries - IATUL) plays an important role in the librarianship of mining. The library, founded in 1765 at the time of the establishment of the Mining Academy, is the oldest library for mining in the world. It comprises a central library in the new library building which was inaugurated in 1980 and 11 branch libraries in the different departments of the college. In accordance with its role, the library collects sources of information for general

education, further education and research at the Mining Academy. In addition it supports the scientific intellectual and cultural life of the region. The library has 470,000 books and journals. It has valuable stocks of old sources of information at its disposal, the international importance of which is to be seen in the concentration and relative completeness of its heritage of books, journals, manuscripts, drawings and other literary documents connected with mining. Specific sources, such as standards, patents, business documents, university publications, special books and information and catalogues are available in the scientific information department and in the branch libraries.

The bookstock of old sources of information available in the "Georgius Agricola" library of the Mining Academy of Freiberg forms the basis for a corresponding collection of the cultural heritage. The most valuable part of it is the scientific old stock ("Reserve précieuse). According to investigations by Peter Schmidt thee features are characteristic of this stock :[13]

1. in contents and form it is inseparably connected with the development of the productive forces, especially in the mining industries
2. it comprises unique copies and rare books of a technical college library, e.g. on geosciences, mining and metallurgy, and thus differs from similar stocks of national-, state- and university libraries.
3. it also contains a wide variety of rare books and unique copies of books on literary science and linguistics, on theology, on numismatics aswell other scientific fields not directly related to mining.

With regard to tectonics it comprises[14] :

1. mathematical-scientific literature pertaining to the coal, iron and steel industry from the 15th to the 20th century
2. books and journals not connected with mining from the 16th to the 19th century
3. the hand-written literary bequest of the founder of geosciences, Abraham Gottlob Werner (1749-1817)
4. manuscripts, mainly from the 16th to the 20th century
5. pamphlets on mining and travelogues from the 18th to the 20th century
6. drawings, maps and atlases from the 16th to the 19th century
7. collections of coins and medals from ancient times to the present, based on the collections of Abraham Gottlob Werner
8. paintings and lithographs of people from the 15th to the 20th century.

The material, technical and personal prerequisites for preserving, cultivating and distributing the cultural heritage of mining were provided by the establishment of a custody (1971) and the equipment of adequate working and reading rooms as well as of storerooms (1980) at the Mining Academy and in a library network "Mining and Metallurgy".

Between 1975 and 1981 the management of the library worked out numerous directives containing statements on methodology, contents and technical-organisational questions for dealing with the literary documents of the cultural heritage.

Considerations concerning the cultural heritage dedicated to mining were also included in the conception worked out in 1981 for establishing a library network and these considerations will have to be specified in other documents (e.g. guidelines for acquisition and weeding out). Peter Schmidt's statement from 1977 "Nowadays the cultivation of the scientific-historical and cultural heritage has indeed become the second main task of the library of the Mining Academy of Freiberg"[15] shows the exemplary support given by the management of the college and by the Library Association of the GDR.

In its work with the cultural heritage the management of the Freiberg college library also takes into account the decisions and advice of the Library Association of the GDR concerning the formation and efficiency of library networks. But special consideration should be given to the tasks described by Helmut Zesewitz[16] at the special conference mentioned at the beginning. All library networks have to proceed from these premises in their responsibility for the cultural heritage, since working with the cultural heritage gains in importance through the establishment of library networks. This means, inter alia :

1. the storage of valuable library materials in specially secured and protected rooms, the working out of instructions for protecting the cultural heritage in dangerous situations as well as the drawing up of guidelines for the use of the cultural heritage
2. taking into consideration stored literature and the central storage library
3. sifting through the stock for literary documents of the cultural heritage as a long-term and deliberate task of librarians

4. good cooperation between librarians and historians in identifying and cataloguing the cultural heritage
5. making sure that valuable bookstocks are preserved during weedings and movements of stock due to structural changes within the building.

The statements made so far face the "mining and metallurgy" library network under the leadership of the Freiberg college library with the following tasks in the following order:

1. the stock to be preserved and maintained
   1.1. in the central library in the rooms provided for this purpose in 1980 in the new library building
   1.2. in the sense of cultivating, conserving and restoring the stocks in a division of labour with bookbinding firms and other libraries
2. acquisition to be accomplished
   2.1. by sifting in the individual libraries ("store-room-method"[17])
   2.2. by means of stock-lists from other libraries
   2.3. by supplying bookstocks of the headquarters for scientific old stock at the Deutsche Staatsbibliothek in Berlin.
   2.4. by purchases from second-hand bookshops in the GDR
   2.5. by the purchase of reprints
3. cataloging to be done
   3.1. within the framework of the alphabetical general catalogue of the special network which is to be compiled (it is an important basis for acquisition and inter-library lending within the network)
   3.2. by alphabetically and systematically arranged catalogues as well as special catalogues according to

locality, languages, classification and other aspects[18]

3.3. specific reference and information work

4. research to be done

4.1. special bibliothecarial and special bibliographical research activities

4.2. detailed investigations in the field of book science

4.3. contributions to scientific-historical research in the field of the corresponding scientific branches of mining

4.4. support for the research in the field of the history of universities and firms

5. utilization is accomplished by

5.1. the provision of the bookstocks in the reading-rooms

5.2. the realization of demands for inter-library lending mostly by microfilms, photocopies and xerox-copying

6. distribution is accomplished by

6.1. exhibitions on political events and historical anniversaries, on the occation of "Sunday Universties"[21], special conferences and the annual Mining and Metallurgical Conference

6.2. visits and specific users' training as well as lectures and the presentation of papers, e.g. in the Urania organization and in the Association of Culture

6.3. symposia and colloquia on special subjects

6.4. facsimile editions of the VEB Deutscher Verlag für Grundstoffindustrie Leipzig[22]

6.5. publications within the series "Publications of the scientific information centr of the Mining Academy of Freiberg" [23, 24]

6.6. publications in the trade press of librarianship and mining [25]

These tasks are included in long-term plans and are being realized gradually within the library network.

International aspects of the cultural heritage in mining

National coordination and cooperation in the GDR is guaranteed by the "Mining and Metallurgy" library network. The international division of labour as well as the peaceful coexistence between countries with different social systems demand cooperation beyond the boundaries of the GDR, too. This also corresponds to the aims of the library associations IFLA and IATUL.

The beginnings of such international activities go back a long way. A start was made in 1972 with the coordination of responsibilities between the library of the Technical University of Miskolc as the central mining library of Hungary and the Freiberg university library. The cultural heritage is included in the working plans (this also applies to the library of the university for forestry and woodindustry of Sopron which possesses old publications of importance for mining). The results of the joint work are published regularly.[23, 26]

Further contacts were established with the libraries of mining colleges and universities of the USSR in 1974 (Moscow, Leningrad, Baku, Minsk), of Poland (Krakow, Wroclaw) and of Czechoslovakia (Ostrava, Kosice). After 1977 other countries, such as Rumania, Bulgaria, Austria and Finland followed with their corresponding special libraries.

Within the framework of the international exchange of publications, the library of the Mining Academy of Freiberg at present maintains contacts with over 100 mining libraries in 50 countries.

On these bases of international work the "Mining and Metallurgy" library network can be established. The evidence of the literary documents belonging to the cultural heritage beyond the boundaries of one country is imperative in view of the great gaps for past centuries as well as the mass production of the present time.

Summary

Old sources of information are an important cultural asset the preservation of which is initially a task of cultural protection (maintaining and safekeeping). The further tasks of the librarian are acquisition, cataloging, investigation, utilization and distribution. Library networks are an ideal basis for taking care of the cultural heritage of literary documents. For the mining industries of the GDR these problems are being solved by the "Mining and Metallurgy" library network, which is directed by the central library with the name " 'Georgius Agricola' Library of the Mining Academy of Freiberg". The university library of Freiberg is an efficient institution which concerning personnel, finance and space, is in a position to solve the tasks it faces. It has the broad basis of historically valuable bookstocks and the staff is experienced in working with old sources of information. The national responsibility embodied in the "Kulturgutschutzgesetz" (law for the preservation of cultural assets) is being usefully complemented by the international forms of coordination and cooperation guaranteed in the statutes of the IFLA and IATUL.

[1] Gesetz zum Schutz des Kulturgutes der Deutschen Demokratischen Republik - Kulturgutschutzgesetz -. In: GBl. der DDR. Teil 1. - Berlin (1980 - 07 - 10) = 20. - S. 191 - 194.

[2] Erste Durchführungsbestimmung zum Kulturgutschutzgesetz - Geschütztes Kulturgut -. In: GBl. der DDR. Teil 1. - Berlin (1980 - 07 - 17) = 21. - S. 213 - 214.

[3] Statut des Nationalen Rates der Deutschen Demokratischen Republik zur Pflege und Verbreitung des deutschen Kulturerbes - Beschluß des Ministerrates. - In: GBl. der DDR. Teil 1. - Berlin (1980 - 10 - 8) = 28. - S. 275 - 277.

[4] Die Verantwortung der Bibliotheken bei der Wahrung, Pflege und Verbreitung des kulturellen Erbes: Materialien der Fachtagung/Bibliotheksverband der DDR. - Berlin, 1981. - 204 S.

[5] Zesewitz, Helmut: Die technischen Fachbibliotheken und das naturwissenschaftlich-technische Erbe. - In: Die Verantwortung der Bibliotheken bei der Wahrung, Pflege und Verbreitung des kulturellen Erbes ... - S. 95 - 101.

[6] Zesewitz, Helmut: Kulturelles Erbe in Fachbibliotheken. - In: Zentralbl. Bibl.-Wesen 93 (1979) S. 539 - 543.

[7] Raabe, Paul: Das alte und das kostbare Buch - eine bibliothekarische Zukunftaufgabe. - In: Bibliotheksbau heute/Hrsg. Rolf Fuhlrott. - Frankfurt a. M., 1981. - S. 164 - 188. - (Zeitschr. für Bibl.-Wes. und Bibliogr.: Sonder-H.; 33)

[8] Scheffel, Dieter: Beitrag zur Diskussion. - In: Die Verantwortung der Bibliotheken bei der Wahrung, Pflege und Verbreitung des kulturellen Erbes ... - S. 102 - 103.

[21] Schmidmaier, Dieter: Von Büchern und Bibliotheken - Sonntagsuniversität am 15. März 1981. - In: Arbeiten aus den Bibliothek der Bergakademie Freiberg/DDR und der Technischen Universität Miskolc/VR Ungarn 4 (1981) S. 28 - 41

[22] als Beispiel: Rößler, Balthasar: Speculum metallurgiae politissimum. - Leipzig, 1980. - 168 S. - Faks.-Druck der Erstausg. von 1700. - Mit einem Kommentarband, verfaßt von Heinz Meixner, Walter Schellhas und Peter Schmidt.

[23] besonders die Publikationen von Peter Schmidt "Unbekannter Jakob-Krause-Einband zum Chronicon Carionis in Freiberg" und Walter Schellhas "Der Rechenmeister Adam Ries (1492 bis 1559) und der Bergbau", die vier bisher erschienenen Bände "Arbeiten aus den Bibliotheken der Bergakademie Freiberg/ DDR und der Technischen Universität Miskolc/VR Ungarn" 1976 - 1981 sowie Elena Errmann "Ausgaben von Druckwerken, die auf dem Territorium Rußlands bis zum Jahre 1900 erschienen sind".

[24] Schmidmaier, Dieter: Veröffentlichungen der Freiberger Hochschulbibliothek als Bestandteil der Öffentlichkeitsarbeit. - In: Zentralbl. Bibl.-Wesen 95 (1981) S. 553 - 554.

[25] Als neuestes Beispiel: Buberl, Annemarie: Die Berg- und Hüttenmännischen Tage der Bergakademie Freiberg im Spiegel ihrer Plaketten/Medaillen/ Annemarie Buberl; Willi Goder; Peter Schmidt. - In: Neue Bergbautechnik 11 (1981) S. 704 - 710.

[26] In der unter Nr. 24 genannten Reihe "Veröffentlichungen" auch: Hiller, István "Zur Geschichte der Bibliothek der Universität für Forstwesen und Holzindustrie in Sopron/VR Ungarn", Hiller, István und Schmidmaier, Dieter "Gedanken zur Geschichte eines ungarisch-deutschen und deutsch-ungarischen Fachwörterbuches" und (in Vorbereitung) Hiller, István und

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PATENT SEARCH IN SPECIAL LIBRARIES

by

G. KRUSE (FRG)

Meeting 166
SI yes/no

Patent Search in Special Libraries

Patent literature is becoming more and more important in the field of technical and scientific information. Through research carried out by LIEBESNY* we know that only 5 - 10% of patent information can be found in periodicals or monographs. Libraries and librarians are integrated into the flow of information between scientists and I believe that librarians should take precautions not to allow patent information to be supplied by other institutions, such as documentation centres and private organisations, who always claim they can supply the information more cheaply and more efficiently than libraries.

Every librarian should be able to give comprehensive information about patent literature, and patent libraries should be integrated into library systems as a part of an extensive information network.

When somebody is researching a patent, there are always two main questions:

1. What is the legal status of a certain well known application?

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* F. Liebesny et al.: The scientific and technical information contained in patent specifications - the extent and time factors of its publication in other forms of literature. OSTI Report 5177, London 1973.

2. Is there any new application within my field of research?

They can be answered as follows:

1. The legal status is continuously changing. Applications and patents are sold, owners of patents die and fees are not paid. The actual status can only be found at the register of patents, kept by the patent authorities. Nowadays most libraries have or will be able to obtain within the next few years installations which allow direct access to databank systems providing information from the register of patents easily and quickly for their customers, complete with print-outs from the register where necessary. In Europe, anybody connected to Euronet DIANE has access to the patent register of the European Patents Office, and other patent offices are preparing their registers for connection to public networks. Telephone access to the required patent authority is of course also available.

2. The second question is more interesting.
Once immediate sources are exhausted, the bibliographical work can only be continued by tapping sources other than those directly available to the librarian within bibliographies.

It cannot of course be the duty of every library to collect and store patent literature; this task is and must remain the duty of special libraries. The information they hold should, however, be available to every interested customer; here is the point we must discuss.

There are at present approximately 24 million patent documents in existence, the product of the applicants to the world's estimated 43 patent authorities; technical know-how that could become the basis of future development in all fields of science and industry. These documents increase in number by 650,000 per year. When somebody is called upon to make a certain construction, or to develop a new technical process or treatment, it is an obvious advantage for him to be able to check the patent literature relevant to his research. This applies especially where developing countries are concerned but in Europe as well the pressure is on to allow more free access to patent documentation for industrial firms and their customers. In truth, there is no better technical inspiration than browsing through patent documentation.

Patent documentions are set up systematically as books in a reading room, but there is no reference necessary from the sub class to the main class. At every position we are able to find the complete document.

There is no expressiveness of catchwords for patents, that is the reason we cannot use retrieval method, which work with the logical combination of catchwords and formula indexes.

Mostly technical expressions are not so very well explained and need to be supplemented by technical drawings, which express more clearly the idea. Patent documentations are the collection of drawings.

Classification systems - and as librarians we know the problems presented by these systems - are becomming more and more refined as science and technology develop.

But there is one problem. If you order patent documents of different origin together in one classified collection there is no guarantee, that the classification officer will have used the same principle, when classifying his documents.

In my opinion that is the reason for the reluctance of examining patent offices to open their search files in full to the public. There are "patent depository libraries" in nearly all industrialised countries but it is impossible at present to answer the main question - is my invention really new? - with absolute certainty. Then the next question: could there be in existence better, more practical ideas which would make my invention more economically viable and make it more interesting for companies to ask for a manufacturing licence? Unfortunately there is no definite answer to this question either; the inaccessability of the necessary research material prevents a definite yes or no.

"Patent depository libraries" were originally the idea of the French who, after the revolution of 1789, wanted to freely publish new ideas and inventions in lists anybody could understand and use. In 1803 the first catalogue of inventions was printed. When one thinks of how significant industrial property has become in the years since then, there has been very little progress in the methods of giving information about usable inventions and technical ideas.

In Europe there are various "patent depository libraries" but they offer only collections divided into main classes, and then often only numerical series. In many cases that documentation which is available to the public is arranged in classified national series, often separated into the several editions of the classification.

This means that, were you looking for the patent literature on, for example, skeleton cylinder aerials, or folded slot aerials, you would have to consult every national series using the method of classification decided upon by the different offices for those particular inventions. Only the examiners of patent authorities have a complete search file, and in most cases the files are notated by the examiner to such an extent that they cannot be used by anyone else but him.

Here we see the predicament the customer of the library finds himself in when he wants to find the 90% of informaion not provided by periodicals and monographs. Only specialists are able to use these public documents to try and ascertain whether the idea, procedure or invention is new or not.

If we were to compare the present situation regarding patent documentation with ordinary libraries and their services, we would see that the system of documentation is like the inaccessible and old-fashioned stack-room library with its inferior, difficult to use catalogue and slow loan service. The open-shelf library should be used as an example; patent documentation should be as easily accessible as the book on the shelf of the public library.

In Europe nearly every scientific library has its own classification system. Patent offices in Europe use a uniform system, the International Patent Classification. The classification system is revised every five years by WIPO (the World Industrial Property Organisation) but uniform classification does not guarantee homogeneous classification. This is only possible if the expressions used are well defined. There are about 55,000 subgroups used in the third edition of the International Patent Classification (IPC). If the system were to have more subgroupings, as does the US Patent Classification system which makes use of 103,000, then it would follow that the classification could be more exact.
But time and care are very important to the process; with a larger number of more closely defined subgroup expressions, the classification official needs more time to study them and the patent researcher as well. And the second will always be wondering whether or not the first has used the same amount of care in choosing a group as he is using in searching for one.

At the moment there are, on average almost 300 documents per subgroup as defined by IPC. However, patent documents follow "family systems" to help reduce the number of applications in

one group. Most patents are applied for in several industrialised countries. All these applications belong to one patent family using the dates of priority to bring the original application and those made in other countries together. The examiner will collect those applications which are made in the language he can master best, but of course the drawings are the same.

But I have to give you some typical examples extracted from a patent documentation. But you do not have to be able to read technical drawings literature.

I have chosen a very simple example: Libraries have to select chairs to furnish their reading rooms. I will compare this work wth the selection of books from bibliographics. We cannot select only the books booksellers ae offering, we have to use bibliographics. If we would select our furniture with the same care, we should use a patent search file.

I cannot show you now all the 300 drawings collected in the search files, but I will show you some from search applications that are in competition.

A technically-minded person - and that's the kind of person who is interested in patent documents - could get a lot of ideas by studying these drawings, and most of us will probably react by saying, "If only I'd thought of that!" The figures researched by LIEBESNY et al spring once again to mind - only 5 - 10% of this information is available in non-patent literature.

We have to think about technological transfer, especially for developing countries. In my opinion information about practical, usable technology is far more important for these countries than highly developed scientific methods they cannot grasp or the supply of complicated machinery they cannot service. They have to find ther own technology and the use of patent literature would enable them to apply the ideas contained therein to their own problems.

The task of librarians is to mediate information, scientific, technical and practical. The use of 25 million technical ideas is currently the reserve of approximately 5,000 experts throughout the world, those who use the 20 nearly complete documentation centres out of the 43 that exist. Only large industrial firms, observing their own financial interests, are able to pay for extensive research - smaller firms have to rely on what is available to the public.

Information on patents can be researched by an expert, privately, for a fee of approximately 500 dollars.

These patent research experts are based around the national patents offices, indeed some of the patent offices run services of their own. The information provided tends to be sketchy, however, you will be told whether or not your idea is a new one, and be given abstracted dates of periodicals, publications and patent literature describing ideas competing with yours.

But what can be done to make patent literature more popular and easy to use? When patent documentation started at the end of the last century only the USA and certain European countries were interested in patent procedures. Now however the situation has changed as more and more nations have become industrialised.

The slower starters should be able to benefit from the development of the others.

Patent authorities are realising the possibilities of accepting patent applications in digital form. Storage facilities have become cheaper in the last ten years and the storage of drawings will become cheaper and more accurate than at present.

We have to use modern technology to open the search files for more interested people. The ideal solution would seem to be for a complete collection of patent literature to be available on microfiche.

For 15 years punched microfilm cards have been used in the exchange of records between patent offices, the original idea being that this would make it possible to sort new applications into the files automatically. Unfortunately, these cards have not proved as successful as might have been hoped. There are only eight exposures per card and one normally needs three cards for one patent application. The different coefficients of expansion between film and paper demands a certain humidity and temperature in the storeroom otherwise it is impossble to sort the cards automatically. Under the very best conditions one card in every 10,000 will be damaged during the automatic sorting process and the whole collection has to be sorted six times to place a new series in the correct position in the files. In most patent offices punched microfilm are source by hand. Punched microfilm cards are very expensive to produce and with the added problems encountered during the sorting process they cannot be recommended by practical thinking documentalists. With the technical

means now available, microfiche is the alternative. There are 25 million documents, usually consisting of 12 pages each - 1 main and 3 sub-classifications on average - here we would have 5 million microfiche with 250 exposures per fiche. Here again, despite huge cutting down, there is a lot of material to sort. Here we could compare the situation with regular library cataloging. Large libraries have different catalogue "epochs", making it necessary to use the catalogue three or four times before one determines whether a book is in the library or not. For example there may be a typical development in certain scientific and technical fields before 1920, the next period will be 1920-1950, and so on. To narrow down the field, it would be possible to record on microfiche merely the title page of an application together with the technical drawings of the invention described. This would be sufficient for initial research and would cut the requirement down considerably - here we would need 1.2 million microfiche for the complete record, and anyone interested in further details could obtain them upon request.

Pergamon Press in England are working on a system to keep the technical drawings on video disc. Interested parties can key into a data bank system to obtain full details of the application. Two visual display units are necessary, one for the technical drawings and one for the text. This is a development which could mean a lot for the future; the system is fast and flexible.

Industrial property is a prior interest of industrial firms. As a librarian, I feel that other interested groups have a right to information - the individual, the smaller company, in fact anybody who could put the informaton to good use. I feel obliged to work torwards the opening of the search files of patent applications, to make them just as available as books and periodicals are in a normal library. 25 million ideas cannot remain the reserve of a handful of experts.

As librarians we are familiar with the practical side: we know the methods, we know the organisation - we know how information should be distributed. The protection of industrial property is the task of patent authorities. The mediation of patent literature should become the task of technical libraries. On a national scale, this is no problem. World-wide, much more could be done to make patent literature available, especially for developing countries. A feasibility study is needed to determine the methods to be used and the costs. Thereafter the necessary finance must be gathered.

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48th GENERAL CONFERENCE OF THE
INTERNATIONAL FEDERATION OF LIBRARY ASSOCIATIONS AND INSTITUTIONS (IFLA)

ACCESS TO DOCUMENTS IN BRAZIL:
Interlibrary Loan Programme-COMUT

by Antonio MIRANDA
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Topic: "Science and Technology Libraries with Central Function in National and International Library Networks".

Meeting 146

ABSTRACT

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- Interlibrary Loan Programme-COMUT.

This work states that libraries are able to assist between 40% to 60% of the information demand bases on their own holdings ("availability") and, consequently, they have to rely heavily in the same percentage on interlibrary loan services ("accessibility"). It discusses the international effort to build up a national information system that would facilitate bibliographic control and international exchange of information. Currently, Brazil does not have a national library, but only a selected group of libraries, specialized in Science and Technology, which performs a central function within the context of the national and international library networks. A description of the Brazilian Program to Access Documents-COMUT - is presented with a discussion of the problem of information transfer in developing countries.

1. Introduction

The availability and accessibility of documents are complementary and inseparable components in the performance analysis of the information unities (libraries, documentation centers) and of more complex organisation such as information systems and networks.

Recent studies show that the users satisfaction level for the use of libraries as a source of information should range from 53% (in the University of Lancaster) to the maximum of 58% (University of Michigan Medical Library). This data was confirmed by the Cecilia Oberhofer survey that found a rate of 52% in the Central Library of the Catholic University of Rio de Janeiro.

The availability is defined here as the capability of a library to provide its users with the information taken from its own stocking, with the requested speed. Hence, the "satisfaction level" should be, for university libraries, according to Saracevic (9), between 40 to 60%. Consequently, we may affirm that libraries failure to respond immediately to the user's request, ranges from 40 to 60%. This failure may be atributed to a number of causes that are not going to be discussed here.

We would only like to stress the much discussed phenomena of "information explosion" that multiply the possibilities of user's demand and makes impractical a acquisition and selection policy that would not consider restrictive criteria of a qualitative and a quantitative nature.

The modern libraries are left with the only alternative: to participate in a cooperative system and network in order to devellop an accessibility strategy for the request of documents that are part of other institutions holdings.

To fullfill these objectives, a number of local, national and international information networks and systems have been created, either with a disciplinar or multidisciplinar scope. These networks and systems have been provided with the indispensable operational tools:

bibliographic control, the dissimination of information, (SDI), the development of union catalogs designed to help the interlibrary loan operations, and contracts and agreements that would make these interlibrary loan operations successful.

2. International systems and strategies to give access to documents

We have seen of lately quite a number of proposals for the creation of systems of bibliographical control and deliver of documents, during congresses and seminars. These proposals were mainly directed to get international organisations sponsorship (UNESCO, OAS, etc). These plans began to appear during the 60s for proposals that were, for its most part, implemented during the following decade, the 70s.

The most successful and important of these programs was, of course, the 1966 UNISIST project in the field of science and technology.

The UNISIST program included only the area of science and technology. With the creation of the NATIS program, the areas of human and social sciences were also included in the system. Both program are now under the auspices of the GIP, UNESCO.

Their objectives are well-known but we have only to stress the emphasis they place on the universal bibliographical control, (UBC); through the development of national information infrastructures. This structure will colect, organise and disseminate the locally-produced literature and finally, it will open the door to an international flow of information under the Universal Availability of Publications program.

Several alternatives have being considered, to solve the complexity of the universal availability publication program, among then the creation of international and national systems and networks by areas of specialization, such as AGRIS (a network of agricultural libraries, under FAO auspices, and INFOTERRA, an environmental information project).

Currently the number of library networks and information systems that cover most of the areas of human knowledge, at both at national and international level is so proliferous that we must rely on directories to be fully aware of all the services they render to the user.

Two keys points must be emphasized when we must discuss the development and proliferation of library networks and systems in developed and developing countries.

2.1 The experience and observation shows a remarked difference about the creation and organisation of libraries networks and systems in the developing contries, compared with the developed countries. In the developed countries the network and system was the result of a slow and gradual process, that came from the necessity to complement the library services, to supply the growing demand of information. This demand was a result of user's need for faster and better quality services.

For years these services were functioning in an informal basis. But after some years of experience and problems, then came the need of a formal structure of the system, through bilateral agreements. This system then took an horizontal,cooperative, non-hierarchical structure that, consisted then of a network of services, with a just necessary minimal centralized control entity (but not too powerfull). Only recently, but with the necessary caution, these networks were on the way to a system concept, i.e. a vertical pattern, more formal and with difined and clear hierarchical structure. It is really an upward movement.

With developing countries, we may say that the process is entirely different. The cause can be attributed to a need to "fill the gaps", to rationalize and speed the organizational process. You can feel a downward movement, instead, in the developing countries. Both process can be analyzed, with its pros and cons, against their social and economic background. Neverthless, it seems that there is no other way left to the developing countries than that to start from a rational plan in order to accelerate the organizational process.

3. Situation in Brazil

Brazil does not have a national central library in the field of science and technology, but a vast array of small-sized libraries that try to develop a cooperative effort through a centrally controlled interlibrary loan system.

In order to fullfill this centrally controlled interlibrary loan and document delivery system COMUT was created in August 1981. COMUT (Programa de Comutação Bibliográfica), is co-sponsored by the Brazilian Ministry of Education and Culture and the National Board for Scientific and Technological Development (CNPq). However, both institutions decided that IBICT/CAPES should be entirely responsible for its planning, financing and supervision of this program.

In applying Maurice Line's terminology, we can consider the structure of COMUT as belonging to the "Model B", i.e., "a concentration on a larger number of libraries this model is based on "a national plan with national funding, by which specific libraries are designated as major national collections in such subjects as technology, economics, medicine, etc. These are in all cases existing libraries, serving researchers and no library has been specifically created for this purpose" (6:65).

Maurice Line though, after a careful study of previous experiences at BLLD, indicates that he does not believe in the success of cooperative systems and suggests the creation of a central stock library to speed the interlibrary loan process. He seems to be convinced that traditional libraries tend to favour their usual clientele. The services rendered to other users gives a lot to be desired and less attention is given to the requests originated from other libraries.

On the contrary Frederick G. Kilgour (5) gives reasons that a decentralized service, with the-support of all advanced technology, and with cost-shared on-line services, seems to be the satisfactory and reasonable model. But, where are the necessary financial resources to develop a centralized collection, as favoured by the British model? Or, to develop a communication system as sophisticated as the American alternative?

By and large, Brazil has 80 universities, 500 institutions of higher education, 1.000 post-graduation courses, a significative number of research institutes located in a geographical areas larger than Europe (8.500.000 km^2).

The reality of the country's limitations with unevenly developed regions and the scarcity of financial resources led the decision makers in Brazil to select a mixed model, more adopted to the national objectives. This model not only rejects the monolithical central library concept but also the cooperative spontaneous system, difficult to be controlled. Instead, the choice was to select a considerable number of libraries, according to specific criteria distribution established to fullfill the regional needs, defined after a pilot project.

4. The objectives of the COMUT Program

COMUT consists of 189 libraries, defined as "basic libraries", these basic libraries were selected after a filtering process through the analysis of 1.200 participant libraries that were part of the national union catalog of periodicals (IBICT Project).

In order to select the "basic libraries" it was decides that these libraries should have sufficient and well-trained staff, adequate reproduction facilities, a good quality and possible most complete collection, and a strategic geographic location with a good communication system. At this moment, we may say that the number of this libraries has grown steadily, from 83 in the first stage to 189 at present.

These 189 libraries that at first glance seem to be quite a numerous set of libraries, truly belong only to 17 universities and 26 research centers, among the most important institutions in the country. All these institutions have agreed to sign the COMUT contracts. These contracts include the following clauses:

4.1 These institution's libraries should keep the national union catalog biannually informed of their current acquisitions, according to IBICT's instructions.

4.2 These libraries should accept the coupons issued by COMUT, as payment for services rendered. Hence, the standardization of the COMUT fees, at national level.

4.3 In order to keep the reliability of the system, the request should be attended immediately. The acceptable average time for user's request should be between 7 to 15 days. The libraries that does not comply with these clauses are liable to suffer the lawful sanctions and may loose the technical and financial incentives usually offered by the federal agencies, responsable for the financial support to library services in the country.

4.4. COMUT created its own operational instruments through the establishment of standardized flow of requests and answers, request forms, standardized envelopes, labels, and other items (stationary etc.) to garantee the constant and steady flow of services, through a previously establish "timing" and regular standards of operations.

The libraries staff are being trained and the users have being motivated and made counscious of the advantages of the system through lectures, debates, advertisement in scientific periodicals, and campaigns thru the radio and television networks.

Among the advantages of the system we emphasize:

. the user will be fully aware that his request will be met through the mechanisms of control defined by the COMUT program policies. This scheme will avoid the previous non-garantee situation that was almost a routine in Brazil's interlibrary loan services.

. the standardization of the routine operation has made possible the control of quality, of the costs and of the speed of the services, as promissed to the user.

. the standardization of the system facilitates the better understanding of all the operations both by librarians and users.

. the acquisition of the COMUT coupons make the interlibrary transaction much more rational and will avoid the complex beaurocratic operations that formely transformed these services into costly and lenghty operations.

. COMUT makes possible to the"basic libraries"the refunding of their services from the central office, on a quarterly basis, avoiding thus the daily routine of charging item by item.

. given the sucess of the Project, the financial incentives given by federal agencies flow directly to the "basic libraries", as incentive tool to develop the libraries collection and infrastructure. These federal agencies make clear that they realised that the investments given to the "COMUT basic libraries" will reach,not the library as such, but the user, countrywide.

5. The structure of the COMUT program

The structure of the COMUT project is rather simple and functional and ask for a minimum staff and maintenance costs. (See Figure 1)

COMUT consists of:

5.1 An Executive Board - 5 members appointed by CAPES and CNPq. They can establish rules and practices and supervise the administrative, financial and political aspects of the program.

5.2 Advisor Board - 9 members representing the"basic-libraries" and other participant institutions. They will be responsible for the guidelines that will express the interests of the majority of the participant institutions.

5.3 Executive Secretariat is directly responsible for carrying on of all operations, control and evaluation of COMUT project. Its headquarters is in Brasilia and the Secretariat is composed of 3 professionals and 3 junior staff. It is responsible for the printing of handbooks, distribution of union catalog print outs, the selling of coupons, the advertising, training, and the refunding to basic-libraries of payment of fees corresponding to services rendered.

5.4 Basic-Libraries - Their coverage includes all the areas of human knowledge although the major grant of the "basic-libraries"

specializes in science and technology. The geographical dispersation includes the regions of the country, although the great majority of the libraries concentrate in the regions lying along the coast where also are concentrated the great bulk of the users of the system.

5.5 "Soliciting libraries" - are all the libraries that request the interlibrary loan services to fullfill the user's requests. During the first year of operation COMUT sold coupons, corresponding to 583.380 copies, totalizing 520 libraries. Several of these libraries are updating their stock of coupons to attend to the growing demand.

6. Tools

6.1 Union catalog

It was decided that a special edition of the "Union Catalog" would be printed and would exclusively include the 189 "basic-libraries" holdings. This edition is in microfiche form through the COMUT System and is distributed to the "soliciting libraries". This catalog is bi-annually updated.

6.2 The coupon

The coupons are stamped with numbers: 1, 2, 5, 10, 20 and 50 that correspond to the number of copies the user may request. The coupons may be combined to express the total number of copies to be supplied to the user. Say, the user may say 25 copies. He may combine tickets worth, 20 and 5 or 2 coupons with 10s and one with 5, according to his need and will. We must stress the flexibility of the system, that permits fractions in the payment of the copies. The price is not stamped in the coupon, because of the inflation rates and the constant updating of prices. Currently the fees charged is $ 0.10 per copied page.

6.3 Material supply

All the supply necessary for the routine operation of the system are standardized (request forms, envelopes, operation handbooks) for all the units of the program and distributed free of charge.

7. COMUTEX - International Access to Documents.So far, COMUT has only supplied copies at national level. But currently a sub-program is under study and planning to provide and search copies of documents in foreign countries. It will be, then, a bi-lateral process where COMUT will provide services to other countries and use traditional foreign suppliers such as BLLD, VINIT, CNRS, NAL and other systems and libraries.

This sub-program is called COMUTEX. COMUT considers of high importance the establishment of a network of "basic-libraries" in other Latin-American contries, destined for interlibrary-loan services thru bilateral agreements. It is rather paradoxal that a Brazilian entity must locate a Bolivian or Argentinian document in a European or American supplier when the source is right there, next to the country.

We should then concentrate our efforts in the development of a network of libraries and information systems in Latin America to guarantee the access to documents that are phisically located in the region. Much attention and devotion have been given to these ideas during regional seminars and studies have been carried out. Among other examples we find the study by the leading specialists José Arias Ordoñez and Octavio Rojas Leon: Red nacional para el intercambio de documentos,i.e., a network for documents delivery in Latin America, sponsored by UNESCO.

8. Conclusions

COMUT has deeply transformed the interlibrary loan panorama and concept in Brazil. So far, the interlibrary loan service, at national levels, was carried on in very selected and specialized areas, such as Education, Agriculture , Medicine and Nuclear Physics and it had not found its natural environment and tools to develop and reach a multidisciplinar and national scope. Until now,because of the weak capability of providing successfull services within the Brazilian limits, it created an excessive dependence on international suppliers. The price paid for the rendering of such services were extremely high and the delivery of the documents slow and would not supply the needs and interests of the country.

The future development of COMUT will guarantee an extraordinary grouth in the number of requests, that till now had been hampered by the obstacles fullfilling. Nowadays, already discussed, COMUT concentrates its efforts into 2 directions: (1) inclusion of the copies of other materials such as patents, chapters of books, reports, and annals of congresses and seminars.

Services at present include only copies articles, thesis and dissertations.

(2) To develop the communication network to include telex services and on-line systems to better provide a speedy document delivery. Currently, about most of the document delivery has to go thru air mail service. Brazil mail service is able to provide a good quality service even when rated with international standards.

We must also attribute the success of the COMUT program to the great proliferation of library alert and selective dissemination of information services, adopted by Brazilian libraries systems as a way of information transfer.

We must stress that an interlibrary loan system, such as COMUT, is a passive instrument, as it only fullfills a specific demand. On the other hand, the modern information system aims at being active, and even aggressive, even trying to antecipate the needs and consequential demands from the user.

Hence the need to develop strategies to create outreach program, to provide the user with the current information about information itself, to supply and ensure the development of the scientific and technological activities. These systems of library alert are the trigger to activate the interlibrary loan services. The other side of the coin is that library alerts and the SDI services can not survive without a well-planned and structured interlibrary loan service.

Usually one tends to consider information as a basic element of the development process.

To the traditional basic planning resources-human, financial and material resources - we should add a 4th one: the informational resource. This is usually taken for granted.

Neverthless, this statement must be seen with caution! The developed countries have reached that stage where they have stored such quantity of information that this monopoly guarantees a supremacy in the international arena. They are able, then, to export the reserve of information: data basis, bibliographical items or photocopies, or more aggressive ways of selling of information such as consultancies, patents, tertiary services on end products.

The developing countries find themselves forced to buy "information packages" that are usually not adaptable to the countries' requirements. The information industry is concentrated in the hands of transnational enterprises.

After examining the situation of the developing countries in relation to transfer of technology, Maria de Nazaré Freitas Pereira concludes that the supply of information provided by transnational industries to most countries for their technological innovations will only increase the dependency to the suppliers. There is no space left for the development of a national technology (11).

To summarize, the information system must comply with the objectives established by the National development plan. The import of information by developing countries will either strenghten the national autonomy in the field of science and technology or reduce it considerably.

Consequently, we may say that a strategy directed at giving access to the primary documents is not a purely technical matter but it is essencially a political action.

Whatever the interpretation derived from the study of our countries situation, we see the urgent need to get full use of sources already accumulated and in existence in our libraries and information centers.But we must again emphasize that this availability, is not enough, indeed. It is necessary to make them accessible to speed up our developing process.

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TABLE 1

INSTITUTIONS THAT MAINTAIN AGREEMENT WITH COMUT - MAY 1982

INSTITUTIONS DIVIDED BY BROAD AREAS OF SPECIALIZATION	NUMBER OF INSTITUTIONS				LIBRARIES/REGIONS					
	UNIVERSITIES	NUMBER OF LIBRARIES	R&D INSTITUTIONS	NUMBER OF LIBRARIES	NOR	N	W	SE	S	TOTAL
A. GENERAL	15	108			1	24	1	31	51	108
B. ARTS										
C. APPLIED SCIENCES	2	2	5	60	5	16	12	15	12	60
D. BIOMEDICAL SCIENCES			2	2				1	1	2
E. PURE SCIENCES			5	4	2			2		4
F. ENGENEERING			10	10		1		3	6	10
G. SOCIAL HUMAN SCIENCES			5	5		1	1	2	1	5
TOTAL	17	109	27	80	8	42	14	54	71	189

Total number of institutions: 44

Total number of libraries : 189

TABLE 2

COMUT

STOCK-LIBRARIES-DIVIDED BY AREA OF SPECIALIZATION/REGION

LIBRARY SPECIALIZATION	TYPE OF LIBRARIES		BY REGIONS					TOTAL OF LIBRARIES
	ESPEC	UNIV	N	NE	CO	SE	S	
A. GENERAL		15	1	4	1	4	5	15
B. ARTS		5		2		1	2	5
C. AGRICULTURAL SCIENCES	56	11	6	17	11	17	16	67
D. BIOMEDICAL SCIENCES	3	22		2		6	17	25
E. PURE SCIENCES	4	21	1	9		5	10	25
F. ENGENEERING	9	19		3	1	10	14	28
G. SOCIAL HUMAN SCIENCES	5	19		5	1	11	7	24
TOTAL	77	112	8	42	14	54	71	189

OBS: These 189 libraries are part of 44 institutions (17 universities and 27 research and development institutions).

FIGURE 1

FLOW CHART OF OPERATIONS OF THE SOLICITING LIBRARY

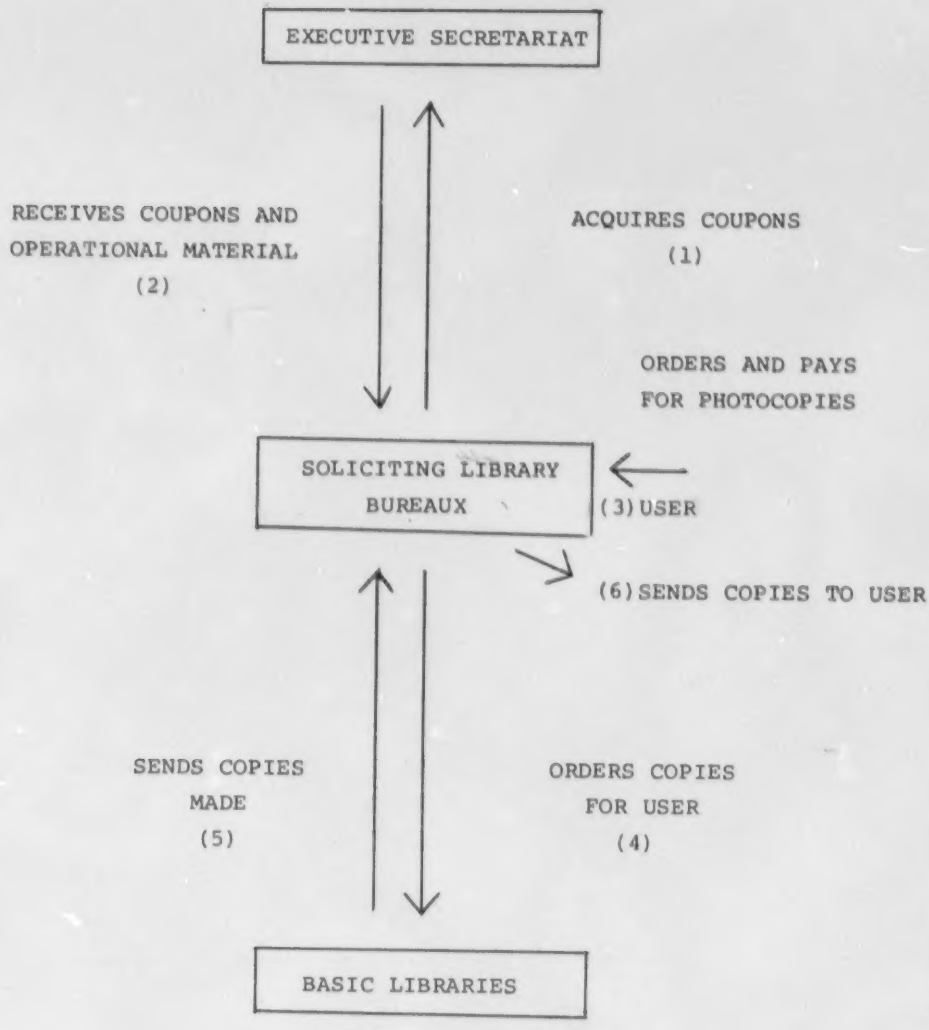
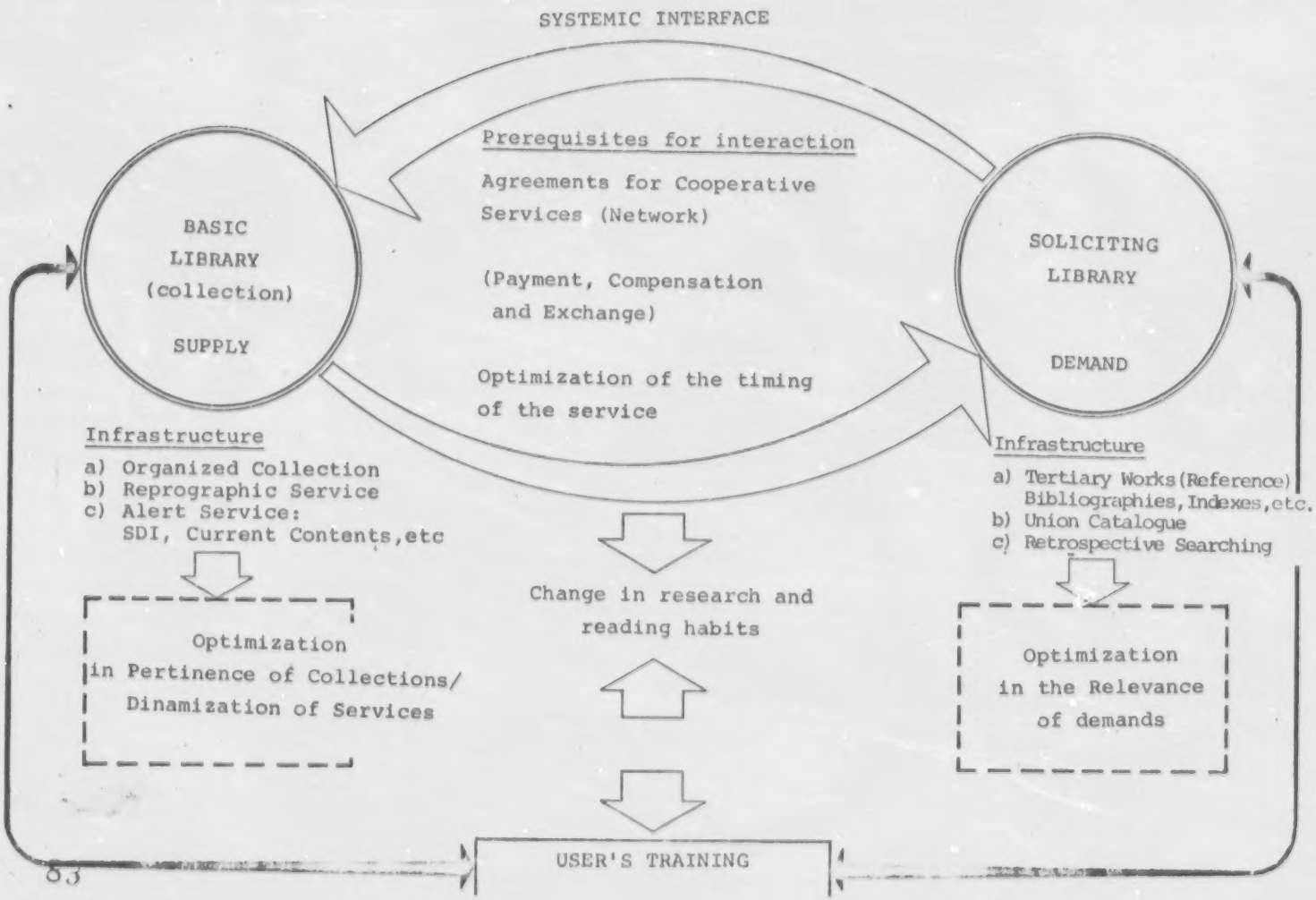


FIGURE 2

COMUT- Programme for Access to Documents in Brazil
COMUTAÇÃO BIBLIOGRÁFICA



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48th IFLA Session, Montreal, August 1982
Division of special libraries
Section of science and technology libraries

PATENT DOCUMENTATION COLLECTIONS OF THE SOVIET UNION

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Director,
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ТБЛ.ОП 1

A.N.Morozov

Patent Documentation Collections of the Soviet Union

In the USSR, as in many other countries, there are no libraries, which build up stocks wholly consisting of patent documentation (excluding libraries of patent and invention agencies). Until quite recently, the All=Union Patent=Technical Library (VPTB) was the only institution of this kind in the country. By the early sixties it became obvious that the stocks of the VPTB could not satisfy the growing social demands in patent documentation in the country and so territorial and specialized collections of patent documentation, intended for specialists and researchers in the field of industry and science, began to be established.

The building up of stocks was accomplished with due consideration for the nature of the appearance of documents dealing with subjects of industrial property, their special purpose and specific characteristics as of a source of information, in other words these stocks were built up on a scientifically sound basis. At the same time methodological recommendations were developed and concrete decisions concerning the main aspects of formation of a State system of patent documentation collections were made. In these conditions problems of management of the building=up process took on a special importance.

Specialized and territorial collections, created within central STI agencies became major units in the system of patent documentation collections then being formed.

ГЕЛОН 1

The interaction and coordination of the activity of these centres between themselves and the VPTB makes it possible for specialists of different ministries and departments of the country to conduct versatile patent studies regardless of the territorial location of the appropriate enterprise or agency.

Currently the organizational structure of the system of collections is represented by collections of the following four levels.

The first and highest level is the VPTB. It boasts of exhaustive collections of domestic and foreign patent documentation covering an unlimited chronological period.

In contemporary conditions the activity of the VPTB is characterized by the following general features. Within a period of over 80 years the Library has built up a collection of patent documentation in 27 languages (15 mill. originals and over 70 mill. items on different information carriers). It is used for purposes of patent=and=licence activity accomplished in the country, the study of similar activity in foreign countries, and the formation of stocks in the republics, regions, ministries and departments of the USSR. The collections of the Library are made up of the following items: a) patent documentation (descriptions of inventions, information/bibliographic publications of patent agencies and government bodies, declaration materials); b) technical literature (scientific and technical books, monographs, etc.), periodicals and serial publications in different branches of science and technology; c) legal patent literature.

The stocks of the All=Union Patent=Technical Library represent a basis for all information and bibliographic work with

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patent documentation in our country. It is on the basis of these collections and activities that the All=Union Research Institute of Patent Information performs the following:

- publishes abstracts and bibliographical information on foreign inventions in the Russian language
- maintains a photograph collection of industrial designs of the USSR, SFRY, Japan, USA and Argentina
- puts out different types of reference and information aids supplementing patent documentation.

These stocks are a great help in the preparation of instructional, methodological, statistic and reference materials concerned with questions of invention, patents and rights. Using the documentation of the VPTB, the All=Union Institute of Scientific and Technical Information, annually publishes about 100 thous. abstracts of descriptions of inventions of different countries in its numerous abstracts journals.

Annually the VPTB issues more than 50 mill. various sources of information to 50 thousand users. These sources include descriptions of inventions; information/bibliographic publications of patent agencies, which are used in connection with patenting of inventions, industrial designs, the registration of trademarks, examination of patent purity of technical matter, examination of patent documentation in the course of creation of new technical means and technological processes, etc. Practically readers can use all the stocks of VPTB in conditions of open access owing to which they can get the documents they need within five minutes.

In order to improve the library/bibliographic support of patent research the composition of readership and the charac-

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ter of the activities they conduct on the basis of the collections is regularly studied through questionnaires in accordance with a special information gathering programme. Statistical data are processed by a computer. As a result the VPTB has at its disposal information on the number of readers, their professions, the character of their demands, etc. All data are classified by the territorial principle (Union republics and 34 large cities) and by location of the institutions and organizations in which the specialists work.

In this way the All=Union Patent=Technical Library annually records the following:

1. Number of readers: from all the Union republics in general and in each Union republic separately; in the 34 largest cities of the country and in each city, which has separate territorial patent collections.

2. Number of readers from industrial enterprises and scientific institutions in the appropriate Union republics and cities of the country.

3. Character of patent research conducted by users: when developing new technique and technology, examining the patent purity of subjects of export and in the course of other kinds of studies.

The second level is identified with specialized collections, which are built up as exhaustively as possible in keeping with the scope of the industrial areas, mainly within the term of renewal of industrial products. These collections, in the first place, contain patent documentation of countries, where the appropriate branch of industry is particularly well developed.

PBJ.OII 1

Ministries and departments, which organize specialized collections of patent documentation in central enterprises and agencies and in appropriate enterprises and research institutes, have over 200 mill. patent documents in their possession. Annually approximately 1.2 mill. readers use them and over 60 mill. sources of information are issued to users.

The third level is represented by territorial collections of universal character. They are made up of patent documents of the main economically developed countries. These collections are used for versatile patent research, including the examination of patent purity of subjects of export.

The necessity of organizing territorial collections, even when spezialized collections function well, is stipulated by the following circumstances:

- themes developed by research institutes and design bureaux change; the scope of activity of industrial enterprises becomes more specific;
- every ministry or department finds it impossible to acquire patent documentation on all scientific and technical aspects in its field, the adjacent aspects in particular;
- necessity of satisfying demands of the local industry;
- the location of institutions and enterprises belonging to different ministries and departments on a vast territory.

Territorial collections are intended for specialists in one or several fields of industry that are covered by a certain economic region. The majority of territorial collections are built up with the aim of satisfying demands of entire economic regions, a development which permits specialists to conduct activities involving patents and licences in conditions of optimal

PATENT

economic expenditure.

Today 109 interdisciplinary territorial STI bodies function in all the Union republics of the USSR. These agencies acquire, process and store patent documentation which is used by specialists engaged in national economy. All in all, these interdisciplinary territorial bodies have over 300 million patent documents in their collections, which are annually used by more than 380 thousand readers. Approximately they annually issue 5o mill. copies of different documents to users and give 90 thous. answers to queries of library and bibliographic character dealing with patents and licenses.

Of the total number of 109 interdisciplinary agencies, 30 are basic territorial patent collections with the help of which the more sophisticated patent studies are conducted. These basic collections contain over 320 mill. patent documents. Annually over 40 mill. patent documents are issued to approximately 90 thous. users, who are mostly specialists engaged in different fields of economics.

The fourth level is identified with the local collections of institutions and enterprises, which are built up in keeping with their specialization. The chronological period and the country, the patent information of which is of particular interest to them, is determined in accordance with the general plan of activities of the specialized collection. Local collections are also a source of specific scientific and technical information in the appropriate subject fields. Owing to their specific nature these collections support patent research in the following instances:

ТЕКСТ 4

- when the current scientific and technical level and the trends of development of different branches of economics are being determined,
- when long=term and current plans of research, design and construction need scientific substantiation;
- when examining domestic and foreign scientific and technical achievements at all stages of development of new technical means and technological processes; when the examination for the absolute novelty of an invention, the examination of an application for an utility patent, the examination of applications for industrial designs and the registration of trade=marks are conducted;
- when examining the patent purity of technical designs and manufactured products, which are to be displayed at exhibitions and fairs, etc.
- when selecting inventions for introduction into economics;
- when carrying out technical/economic research of questions of foreign patenting, the sale and purchase of licences; the filling up of different forms of technical and commercial documentation when signing licensing arrangements or entering into contract.

The main working instrument, which helps to make decisions concering the formation of collections, is the data on the needs in patent documentation of the specialists of an enterprise, branch of industry, a region or a republic and the assessment of the degree to which the collections answer these requirements.

The existing system of patent collections is incessantly

being improved. The degree of satisfqction by the system of the objective demands of society at different chronological stages (the present time, in 5-10 years, etc.) and on different organizational and functional levels is considered to be the leading criterion of its effectiveness and the main methodological principle of its construction and introduction of all changes.

It is expected that the organizational structure of the system will not undergo any substantial changes in the near future though its functions should be further specified and the specific purposefulness of the collections of all four levels should be appreciably increased. In this connection the functional purpose of collections of different levels is being more precisely determined; Patent research of different kinds, that calls for the support of different kinds of collections, is being classified and limits of stocks and the special subject fields covered by the collections, etc. is being established more rigidly. On the whole the improvement and development of the system of collections of patent documentation is being carried out in the following main directions:

a) specification of subject fields covered by the collections and their limits with due regard for the interaction of collections of the higher and lower levels, i.e. the specification of system obligations of every unit of the system;

b) increase of the fullness and reliability of the functioning of the VPTB collections;

c) determination of priorities and prospective subjects of patent collections;

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d) purposeful determination of the necessary degree of duplication of different collections with due regard for their location, departmental subordination, and importance of the work that is being accomplished with their support, etc.;

e) introduction of computers and the use of high capacity communication channels, which would ensure remote access to files of information collected by the central libraries;

f) improvement of reproduction and miniaturization technique and of the facilities of information storage.

The main aim of the improvement of the system of patent documentation collections lies in the raising of the effectiveness of patent research which is based on purposeful activity directed towards the satisfaction of social demands in this information source and rational methods of use of allotted material resources.

In current conditions a centralized order of receipt by the VPTB of all foreign patent documentation, needed in the country, has been introduced, while acquisition by libraries and STI bodies of these information sources is being decentralized. Appropriate local collections are built up according to this principle with due regard for the possibility of their all-round examination by specialists. As a result practically every specialist in the country can study the domestic and foreign patent documentation that he needs. Patent documentation collections, which have today become enormous, are not being turned into special patent libraries and no changes in this direction are envisaged in the near future. In present-day conditions this approach is, from our standpoint, the correct one since research and technical libraries, which ac-

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quire patent documentation are capable of satisfying users' demands for different sources of information. At the same time patent departments of many libraries develop into independent divisions, which solve all problems, beginning with acquisition and ending with use of patent documentations by various categories of readers.

Inventions, as the source of scientific and technical information, or information of an other character, is mostly used by engineers and technicians with the aim of studying technical developments in order to avoid repeated solutions of those technical problems which have already been solved. Among this readership are inventors, which are sometimes singled out as a separate grou . In conditions of Soviet reality this classification would be incorrect since in our country there is no such profession as an "inventor". Engineers, teachers, technicians, workers, etc., can in connection with their professional occupation, become inventors.

The complex character of patent documentation research (the large number of descriptions of inventions in different languages, their specific character as of legal documents, etc) has made it necessary to draw into their research (apart from engineers, technicians and patent experts of different institutions and enterprises, and specialists from libraries and STI bodies) patent lawyers and specialists, who know foreign languages. The chief aim of library workers and STI officers is to provide the technical personnel of their enterprise or agency with all necessary additional information materials. Translators, who translate materials for the engineers and

TRANSLATION

technicians, when they are conducting patent research, also play an auxiliary role.

In this way three groups of readers can be clearly distinguished in the USSR. To the first group belong specialists, whose duties include constant, professional examination of patent documentation; experts who examine applications for inventions and specialists of patent departments, who conduct patent research. The second group covers specialists, who study patent documentation as a source of scientific and technical information in connection with the solution of different scientific and technical problems. They are specialists engaged in different branches of science and industry. The third, auxiliary group is made up of employees of libraries and information bodies and translators.

In the period of the scientific and technical revolution the demands of industry and science to a large degree determine both the trends of scientific research in the field of bibliography and librarianship and the character of interaction of these sciences with the patent branch, documentation, information science, etc. Technical and natural sciences come to depend more and more on the scientific level of library support and this, in its turn, stipulates the necessity of making additional demands of libraries of different levels.

Collections of patent documentation of different levels held in libraries and STI agencies perform a sufficiently definite social function. They occupy a prominent place in their activity, and satisfy the demands of science and technology in appropriate information sources in keeping with the developed principles of their structure and functions.

The dimensions of work involved with patents and licenses, conducted in our country, and the building up of patent documentation collections that goes with it, called for a system approach to the problems of scientific management of library and bibliographic procedures involving patent documentation. The further development of the theory of the building up of patent documentation collections depends, as never before, on theoretical findings in this field. In this connection fundamentals of theory and methods of library and bibliographic support of readers, and the management of the development of library activities involved with patent documentation are being worked out on a new and higher level always taking into account the growing demands of specialists engaged in science and industry.

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48th IFLA Session

Montreal, Canada, August 22-28, 1982

Division of Special Libraries

Section of Scientific and Technology Libraries

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ROLE OF SCIENTIFIC AND TECHNICAL LIBRARIES IN THE SYSTEM OF SCIENTIFIC AND TECHNICAL INFORMATION OF THE USSR

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Moscow 1982

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Annotation

The network of scientific/technical libraries and other special libraries in the USSR is a component of the State wide system of scientific and technical information (SSSTI), which covers leading fields of science, technology and economics. The structure of the network of libraries for science and technology and other special libraries is in keeping with the general principles of organization and structure of the SSSTI and ensures the effective functisning of libraries within the frame-work of the system.

The bulk of the collections of primary sources of the SSSTI is held by special libraries.

Organizational and functional centralization, on the computerization of library and information processes and cooperation with libraries of other systems and departments, represents the main trend in the development of the network.

The network of scientific and technical libraries and other special libraries directly participates in the transformation of SSSTI into the Statewide Automated STI System (SASTIS).

With the help of libraries allocated automated document collections and data banks are being built up within the SASTIS.

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ROLE OF SCIENTIFIC AND TECHNICAL LIBRARIES IN THE SYSTEM OF SCIENTIFIC AND TECHNICAL INFORMATION OF THE USSR

In the USSR the Statewide System of Scientific and Technical Information (SSSTIS) has been created. Its structure is in keeping with the structure of management of the national economy and the system is operating successfully. The main objectives of the system are: identification, processing, analysis, summarization, storage, retrieval and dissemination of information contained in domestic and foreign publications and in unpublished information sources.

The network of scientific/technical libraries and other special libraries, covering approximately 53 thous.libraries, is a component of the SSSTIS as the main holder of collections of primary sources. The State information system, which exists today, has four levels of information bodies:

1) the All-Union level consists of statewide information bodies which support economics with classified information on the basis of centralized processing of certain types of domestic and foreign scientific and technical literature and documentation. The libraries of this level maintain the most comprehensive reference and information collections of documents of different types in the country;

2) the specialized level includes central specialized STI

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bodies and central specialized scientific and technical libraries. The central special bodies of scientific and technical information provide ministries, departments, enterpises and organization with summarized and purposeful information on the basis of wide usage of information materials of All-Union agencies and through processing domestic and foreign literature in accordance with their specialization. The stocks of central specialized scientific and technical libraries are built up with due regard for the problems and tasks of the appropriate field of economics;

3) the territorial level includes republican institutes of information and interdisciplinary territorial STI centres, republican and territorial central scientific and technical libraries. The main task of these agencies is the provision of State and local authorities and management bodies of the republics, territories and regions and enterprises and organizations located in these regions, regardless of their departmental affiliation, with summarized and purposeful information. In their work territorial information bodies and libraries for science and technology use materials of All-Union and central specialized STI bodies. They also built up collections and process domestic and foreign scientific and technical literature and documentation with due regard for the characteristics of the economic development of the appropriate republic, territory or region;

4) the primary level is represented by specialized information centers and information bodies belonging to research institutes, design offices, enterprises, and basic scientific and

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technical libraries, which serve specialists.

The activities of scientific/technical libraries and other special libraries are regarded as one of the main aspects of information work because they hold approximately 2 milliard books, journals and other types of literature and documentation.

Libraries of the All-Union level have the status on an information body and perform all the functions of a STI body with which they are entrusted by the Decree on the SSSTI. The libraries of the second and third levels work in close cooperation with the appropriate information bodies and their tasks are also clearly defined.

Scientific, scientific/technical and other special libraries belonging to enterprises and institutions which have no STI bodies besides providing library service conduct work involved with information support. In cases when enterprises and organization have STI agencies, information and library service is provided on the basis of common collections.

The organizational structure of the network of scientific/technical and other special libraries ensures the effective realization of functions alloted to them within the framework of SSSTI and is in keeping with the general principles of organization and structure of the system. The State Public Library for Science and Technology of the USSR (SPLST) is the main All-Union methodological centre for the network of special libraries.

A scientific and methodological council has been created within the Library. The SPLST determines the principal trends in

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the improvement of the network of special libraries, concrete ways of their realization, published methodological materials on all questions of the activity of libraries. Prominent scientists and specialists in the field of library science, bibliography and informatics take part in the preparation of methodological publications. The collection "Scientific and Technical Libraries of the USSR", published monthly by the Library for Science and Technology, and its participation in the development of State standards in the field of information science, librarianship and publishing, impressively contribute to the organization of methodological management of the network of special libraries. All-Union seminars for the personnel of special libraries, organized by the Library, hold a prominent place in the shating of progressive professional experience and the raising of skills of librarians.

The network of scientific, scientific/technical and other special libraries of the countries covers the leading branches of science, technology and economics. The chief link in the network of special libraries is identified with the libraries of enterprises, organizations, institutes, design offices, etc.

Scientific/technical libraries fuction in practically all research institutes, large design offices and enterprises. Information support of small enterprises and organizations, which lack libraries within their structure, is organized on the basis of central specialized and territorial scientific/technical libraries.

A developed system of bramches of large special libraries also operates. Over 40 mill. scientists and specialists engaged in na-

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tional economy are regular users of special libraries.

The creation of scientific/industrial units and of the agricultural industrial complex called for the expansion of libraries and the formation of basic scientific/technical libraries with the centralization of the main processes for which they are responsible. In conditions of the amalgamation, the interlibrary loan divisions can use literature from the stocks of any library of the industrial complex. The central library of a union creates a united reference and information retrieval system for the stocks of the libraries of the union and maintains a current-avareness service dealing with current acquisitions of the libraries.

Acquisition of document collections of primary sources is realized by libraries according to their type and the functions they perform within the SSSTI. Interdisciplinary, specialized and regional coordination of acquisition, thematic allocation and centralized processing of primary sources has been developed. United specialized and regional reference/information collections become the basis for the organization and use of document collections of the network. The joint formation of collections within the framework of thematic unions, for instance in such fields as construction, machine-building, chemistry, agriculture, mining and metallurgy and the expanded regional library networks, is being realized. In order to further improve acquisition the employees of libraries study the information demands of users through questionnaires, interviews and analysis of refusals to grant readers' requests.

A system of depository storage of rarely used literature

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which nevertheless has a scientific or cultural value has been created in the country. All libraries, regardless of their departamental affiliation, send literature of this kind to depositories and in cases of need they can receve the requested items from them through the interlibrary loan or in the form of copies. The rational distribution of collections among scientific/technical libraries also favours the exchange of collections.

The reference/bibliographical work of libraries of all levels is founded upon the priority use of centralized bibliographical publications: abstracts journals, union printed catalogues, thematic information and bibliographical series, etc. This makes it possible to use All-Union and special bibliographical resources more actively, expands the range of subjects and increase the number of bibliographical aids which are prepared by libraries. A uniform system of recommendatory bibliographical aids, covering the aggregate of mass professions in the economics of the country, is planned.

The network of scientific/technical and other special libraries closely interact with universal libraries, actively use their stocks, including interlibrary loan channels. For 13 years now the "Decree on the uniform statewide system of interlibrary loan in the USSR" is in force in our country. In 1978 the "Decree on the interaction of universal and scientific/technical libraries" and the "Decree on the interaction of regional special and universal depositories" were approved.

United minitoring units are being set up in the regions with the aim of improving the service of specialists. These units help to distribute demands more rationally; they are based on

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united reference and retrieval aids of the libraries-participants.

The joint activities pf libraries of different types are built on principles of coordination, cooperation and mutual aid. The coordination of plans of acquisition of domestic and foreign literature and the creation of centralized specialized regional collections guarantee a much fuller coverage of different groups of readers by library service, helps to reduce expenditures on the purchase, processing and storage of information sources. In this way a ramified and flexible system of information support of specialists engaged in different branches of national economy has been created in the country.

The improvement of the State system of STI is achieved through the creation of data files on the basis of allocated data banks of information agencies and the turning of the SSSTIS into the State automated system of scientific and technical information. This system is founded on the aggregate of All-Union, specialized and territorial compatible automated STI systems. The automated information centres of these systems with their data banks are connected by communication links into a single information complex- - the network of interacting and interconnected automated centres of STI. Currently a system of exchange of data bases on magnetic tape operates in the country.

Such large All-Union libraries as the State Lenin Library, the State Public Library for Science and Technology and some other libraries are a part of the organizational and functional srtucture of the network of automated centres of scientific and technical information.

ГБЛ. ОП 3

Thus the Library for Science and Technology has designed an automated address-reference system of information on foreign publications the data bank of which has codes of libraries which hold large collections. The system of conventional codes of STI bodies and libraries is standardized on a country-wide level and is used in information and library practice. More than 1.5 thous. libraries and STI agencies take part in the system.

The annual input of the system is over 70 thous. titles of foreign books and approximately 20 thous. titles of foreign perio. dicals. The aggregate of technical means is based on computers of one series.

The system offers the following services:

- delivers answers to questions concerning the location of foreign publications in the network of libraries and STI bodies of the country;
- delivers answers to thematic and bibliographical demands of users dealing both with current acquisitions and the retrospective file with the indication pf the address where the primary sources are held;
- prepares statistical data of different character;
- analyses the subscriptions of libraries and STI bodies for foreign publications;
- prepares data files on magnetic tape.

Besides the address-reference service the Library for Science and Technology has an automated system of registration of serial publications of the member-states of the International Centre of STI, a system of registration of delivery and return of books through the interlibrary loan.

ГБЛ. ОН 3

Currently an automated system of STI information on special types of documents and the location of information sources is being developed here.

The Automated System of the State Public Library for Science and Technology of the USSR , which will help to solve the problem of complex automation pf library processes and a unified data file are also being designed. The Library will disseminate magnetic tapes of this system, including the information retrieval system. on algorithms and programs to collective members of this system and to foreign organizations on the basis of bilateral cooperation.

Central specialized and republican scientific/technical and special libraries take part in the processes of gathering, pre-machine processing and input of information. A number of libraries use information of automated systems. In this way the network of scientific/technical and other special libraries directly participate in the transformation of the State STI System into the State automated. STI system.

The creation of this automated system as a component of the State automated system of management of scientific and technical progress and economics will on the basis of a unified information file guarantee operative, full and purposeful information servicing of subscribers and in this way make it possible to introduce the achievements of science and technology into industry more quicly.

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SUPPLYING THE USERS WITH SCIENTIFIC AND TECHNICAL INFORMATION AND SCIENTIFIC DOCUMENTS (WITH SPECIAL REGARD TO THE SOCIALIST REPUBLIC OF SLOVENIA)

by

Mara SLAJPAH, Professor, Director of central TEchnical Library
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SYPPLYING THE USERS WITH SCIENTIFIC AND TECHNICAL INFORMATION AND SCIENTIFIC DOCUMENTS (with special regard to the Socialist Republic of Slovenia)

Mara Šlajpah *)

Synopsis

Users of scientific and technical information and scientific documents - scientists, researchers, specialists and other working people as well as organisations of associated labour- need long before starting an investigation , information about the researches on the same theme which have already been done up to the present moment and about the researches on the same or similar theme being done contemporarly. At the same time, users have to be supplied with primary documents from the libraries at home and abroad. The survey of the scientific-information and library-information system and their interconnection in SR Slovenia is based on the necessity of the users´complete supply with scientific and technical information and primary documents, as it is shown in the General Information Programme of UNESCO.

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1. INTRODUCTION

In the present development of the Socialist Republic of Slovenia, the major attention[1] is paid to the questions regarding the importance and role of science and technology in planning and realizing the programmes of further development of the whole socio-economic system, the entire system of socialist self-management socio-economic relations, further development of working forces as the basis of our economic system, as well as of the system of polytical democracy of the self-management society.

With regard to the ever greater role of science in social development, greater attention is paid to informatics/documentation or to scientific information activities which were developed in the sixties of the 2oth century. Its aim is to provide users with necessary knowledge, with scientific and technical information (further on: scientific information), recorded in written documents with reference to what has been done earlier in their field and what is being done at the present moment. Scientific information is received in a converted form so that it is available to a wide circle of users.

Continuous growth of scientific information - at the occasion of the Intergovernmental Conference on scientific and technical information for development in Paris in 1979 (UNISIST II)[2] it was accepted that the term "scientific information" includes also economic, social, cultural, and other information - is the consequence of the real explosion of scientific and research work in our century. One of the principal rules in the scientific development is the differentiation of science, the emergence of

new independent disciplines and specialiʻation within each scientific discipine.

On one hand the differentiation of science helps the scientists to penetrate ever deeper into the secrets of nature nad society, while on the other hand they lose orientation in the general system of scientific results and even in the work of their colleagues within their own discipline. At the same time we witness very fruitful interconnection of the disciplines such as biochemistry, cibernetics. In the development of science also its speeded up development must be taken into consideration, often being accompanied by duplicating of written documents in which the findings, results of their scientific research work (books, serials, articles, reports, standards in conventional or non-conventional form) are being recorded. American historian of science Derek de Solla Price found out that[3] while the world population doubles every 5o years, the percentage of new scientists per looo inhabitants doubles every 2o years, the number of qualified scientists and of scientific journals doubles every 15 years and the literature on certain subjects (for example X- rays or experimental psychology) every lo years. In 18oo there were about looo scientists in the United States; in 185o their number increased to lo.ooo; in 19oo to loo.ooo and presently their number is excess of 1,ooo.ooo. In 18oo, there were loo journals in the world; in 185o there were 1.ooo journals; in 19oo, the number increased to lo.ooo; and by the 195o's, nearly to loo.ooo. In both cases a lo-fold growth occurred every fifty years.

Because of the development of scientific information, the system of classical libraries and bibliographical services can no

longer completely satisty the users, for it can no longer assure the historical continuity[4], international character and accelerated development of science. The need for information which serves management, planning, deciding and development in different fields of social activities becomes greater and greater. Information is the most important factor which connects nations and states in an international community. A great deal of information is related to science and technology, in the fields where new knowledge arises, they are used in the production of goods in the progress of people's life. People have realized that scientific information is the main source of development of science and technology and that we are continously faced with the need for the communication of information. With reference to that, the cooperation in the field of scientific information is indispensible and the greatest attention should be paid to it. At the same time it requires considerable efforts of all the members of the international community. Simultaneously with the accelerated growth of all kinds of information, the question of the accessibility of information to all the users, is also very actual and not only to a narrow circle of the scientists and specialists. The need for faster and more simple transfer of information caused the so called "information industry". This term includes all commercial information services being occupied with elaboration, processing, communicating and storage of information in data bases. New computer techniques have been introduced, at first their employement was not coordinated. This resulted in differences in equipment, methods of work as well as in standards. Nevertheless, this information industry enabled relativly rapid

flow of knowledge to all the states in which information system network and data basis have not been developed yet. This is especially true for small nations, having too little publishing activity to satisfy all the needs for knowledge. However, small nations express great need for processing, disseminating, systematic collecting and using their own scientific information. Their achievements may be important for other developed and developing countries in condition that they were submitted to such a rapid and specific socio-economic development as for instance the nations and nationalities of Yugoslavia.

UNESCO pays great attention to the flow of scientific information. Since 1971 UNISIST I has been working at UNESCO (United Nations International System of Information in Science and Technology), a long-term programme which is to encourage and lead the development and cooperation among scientific and technical information services on national, regional and international level in all fields of science and technology, though it was at first oriented to natural sciences. After the union between the section Scientific and technical information and documentation, which founded UNISIST, and the section Documentation, libraries and archives, the General Information Programme (GIP) appeared, often called "new UNISIST". It involves the entire information structure (libraries, documentation centres, archives, information networks etc.). In 1979 the Intergovernmental Conference on scientific and technical information was called in Paris. On the basis of the past activities, the conference prepared further instructions. The suggested information structure UNISIST II assures the complete service to the users: at first the latest scientific information according to their information interest (SDI information) or according to a specific subject for longer period (retrospective information) from purchased and home-made, own data bases or by on-line connection with international telecomunicational networks for data transmission. On the basis of the given scientific information the user decides upon a selection of relevant primary documents, being stored at libraries at home and abroad. Regarding to this, the realisation of this system depends also on the modern orientation and organisation of the libraries.

This development in the field of scientific information has indubitably brought about new principles in the libraries, storing scientific documents. The user has been placed in the centre of their attention, library stock is widely open to him, available the whole day under equal conditions. It is especially true for central university libraries in which the majority of scientific documents is being stored. 5) Because of the ever greater publishing activity libraries had to bring up to dates their work also to divide the fields of knowledge in order to coordinate the purchase of literature, to agree upon entering the data about these documents in union catalogues and perform interlibrary loan by the means of union catalogues for widely extended scientific and technical fields.

6) The emergence of a new discipline, called informatics/documentation, enlarged the users need for primary documents, especially about 1965, when data basis had already been introduced in some countries and, according to that, scientists were given more scientific information about literature, which encouraged their interest in primary documents.

7) The development in the field of scientific information coincided then with even more revolutional development of technical means, especially with introducing computer data basis, which enabled faster and more efficient processing of documents as it was possible before. Regarding to that, the processing of the data of primary sources in libraries became indispensable for conducting controlling the enormous crowd of scientific information. Simultaneously, it enabled centralized processing in which bibliographic sources of various libraries are processed together.

By the means of on-line bibliographic networks the initial programme of coordinated purchase of literature in libraries grew up to the universal cooperation, being conducted with the purchase, bibliographic control, interlibrary loan and cooperated storage of documents.

The goal of the automation in documentation is, as it has already been stated, mostly to provide the users with SDI and retrospective information in the form of secondary documents, mostly abstracts of articles from scientific journals, which are nowadays the main source of scientific information and occupy 8)

the first place among all the types of scientific documents. The study of bibliographic demand of thousands of American scientists showed that 68% of demands were from journals, while scientific and technical journals give 70% of all the sources used by electrical engineers in Great Britain.

With regard to this fact, abstract articles in referative journals and data bases occupy the first place, especially in the field of science and technology and biomedicine, little less in the field of social sciences.

2. STATE OF THE INFORMATION STRUCTURE IN SLOVENIA

2.1. LIBRARIES, SPECIALIZED INFORMATION CENTRES, INFORMATION NETWORK

In the Social plan of Yugoslavia for the period of 1976 to 1980 it is declared that [9] the federation, republics, and autonomous provinces will create the conditions to develop up-to-date system of scientific and technical information in the Socialist Federal Republic of Yugoslavia, by the means of which the joining to European and world wide system for scientific and technical information will be ensured. The interchange of information with other countries, especially non-aligned and developing countries would be more efficient. In Yugoslavia, a uniform social information system is being formed, based upon the decisions of the performers in the form of self-management agreements.

On such a legal basis, already in 1976 the [10] Self-management Agreement for Scientific and Technical Information Processing (further on: The Self-management Agreement) was accepted, in which the research councils in the republics and autonomous provinces (further on: subscribers) decided upon a uniform basis, principles and common purposes in order to accelerate the development of Yugoslav system for processing scientific and technical information (further on: scientific information).

At that time, the system of scientific information in the republics and provinces was submitted to a considerable, though uneven development. The self-management agreement should help the research work, economy, and education to establish more efficient and selective information giving to the users.

Picture 1:

Coordination of the system for processing of scientific information is performed by the Committee for the system of scientific information at the Alliance of Republic and Province Research Councils. Executive Committee is occupied with the coordinated realization of the self-management agreement. The Executive Committee is constituted of one representative of each republic information network.

Picture 2:

On the top of the network there are Republic Research Council, Republic Computer Centre (RRC) and University Computer Centre (RCU), and, according to [11] Self-management Agreement on Referral Activities in Yugoslavia, referral centre at the National and University Library in Ljubljana (NUK). NUK, Central Technical Library of the Edvard Kardelj University of Ljubljana (CTK) and University Library in Maribor (UKM) are the central university libraries that keep the greatest deal of scientific documents, completely open to users. By the means of terminals, they are directly connected with the RRC and RCU, where the central data base is being kept and processed for all scientific fields: 1) purchased data base; 2) data base processed in collaboration with foreign centres [12]; 3) data base processed at home, our own data base, from which (1-3) mostly SDI and retrospective information, or, in some cases only retrospective information, is being processed.

2.1.1. SCHEME OF THE SYSTEM OF SCIENTIFIC AND TECHNICAL INFORMATION OF SLOVENIA

CENTRAL DATA BASE

DATA BASE	FIELD	ORGANISATION PROCESSING DATA BASE	COMPUTER DATA BASE SERVICES	
ALKALOIDI	alcaloids	FNT-RCPU-VTO kemija in kemijska tehnologija, Ljubljana	RP	OWN DATA BASE
BIOMEDICINA SLOVENICA	medicine	Medicinska fakulteta, Inštitut za biomedicinsko informatiko, Ljubljana	SDI, RP	
INES	ecology	Kemijski inštitut Boris Kidrič, Ljubljana	RP	

DATA BASE	FIELD	ORGANISATION PROCESSING DATA BASE	COMPUTER DATA BASE SERVICES	
KISIK	spectra	KIBK, Ljubljana	RP	OWN DATA BASE
POLI	infra red spectra	KIBK, Ljubljana	RP	
SAIDC-ST	mechanical	Fakulteta za strojništvo-SIC za strojništvo	SDI, RP	
SAIDC-EL	electrotechnics	Informacijski center, Ljubljana ISKRA ZORIN, TOZD INDOK CENTER, Ljubljana	SDI, RP	
SAIDC-TE	textile technology	Visoka tehniška šola, Maribor, SIC za tekstil	SDI, RP	
	sociology, political sciences, journalism	Fakulteta za sociologijo, politične vede in novinarstvo, SIC za družboslovje	SLI bulletin	
	economy and related sciences	Centralna ekonomska knjižnica, Ljubljana SIC za ekonomijo	SDI, RP bulletin	
SAIDC-GR	civil engineering	CTK, SIC za graditeljstvo	RP	
CHEMICAL ABSTRACTS SEARCH	chemistry	FNT-RCPU-VTO Kemija in kemijska tehnologija SIC za kemijo, Ljubljana Referalni center Sveučilišta u Zagrebu	SDI, partly RP	PURCHASED DATA BASE
COMPENDEX	technics	CTK, SIC za tehniko	SDI, RP	
INSPEC A	physics	Inštitut Jožef Stefan, Ljubljana	SDI, RP	
INSPEC B,C	electrotechnics, electronics, automation	ISKRA ZORIN, TOZD INDOK CENTER, Ljubljana	SDI, RP	
ISMEC	mechanical engineering	Fakulteta za strojništvo, SIC za strojništvo, Ljubljana ISKRA ZORIN, TOZD INDOK CENTER, Ljubljana	SDI, RP	
CANCERNET-	oncology	Onkološki inštitut, Ljubljana-jugoslovanski INDOK center za onkologijo CANCERNET Villejuif	SDI, RP	COLLABORATION WITH FOREIGN CENTRES
INPADOC	patents	Informacijski center, Lj.	SDI, IPC	
RSWB	civil engineering	CTK-SIC za graditeljstvo Ljubljana	SDI, RP	

The information structure is organized according to scientific fields by the means of specialized information centres (SIC) which are included either into republic or federal documentation system (CANCERNET). The centres are organized by the central university library (CTK) or by other university libraries, except in two cases (ISKRA; Information centre, Ljubljana). Location of the special information centres at the university organisations ensures greater publicity of the management to the users. Members of the special information centre are organisations which have developed libraries and information services.

Special information center for civil engineering, organized by the Central Technical Library, is for instance constituted by 14 members: 1) CTK; 2) FAGG-VTOZD gradbeništvo in geodezija; 3) Visoka tehniška šola, Maribor; 4) Zavod za raziskavo materiala in konstrukcij, Ljubljana; 5) Urbanistični inštitut SRS, Ljubljana; 6) Zavod za spomeniško varstvo, Ljubljana; 7) Inštitut za geodezijo in fotogrametrijo, Ljubljana; 8) Zavod SRS za družbeno in prostorsko planiranje, Ljubljana; 9) Gradbeni center Slovenije, Ljubljana - specializirani INDOK podcenter za stanovanjsko graditev in stanovanjsko gospodarstvo; 10) Splošno združenje gradbeništva in IGM Slovenije, Ljubljana; 11) IB-Elektroprojekt, Ljubljana; 12) SGP-Slovenija ceste - Tehnika; 13) Gradis, Ljubljana; 14) SGP Gorica, Nova Gorica.

The organisation of the special information centres is important also because many of the members are from industry. It is known that [13] original contributions to technological independence can only be the result of the many years' efforts of skilled scientists, leaning against the mass basis of innovators and creative workers in the production.

2.1.2.

According to the directives of UNISIST I and UNISIST II, which have recently been included into the [14] Programme of development of the scientific information in Yugoslavia in collaboration with republics and provinces for the period from 1981 to 1985, and which was prepared by the Committee for the System of Scientific Information, there are two centres in Slovenia, maintaining on-line connection with foreign information centres:

1. Since 1978 Inštitut za biomecinsko informatiko in Ljubljana, has been maintaining on-line connection with DIMI-Deutsches Institut für medizinische Dokumentation und Information, Köln, through EURONET-Diane and DIMIDENT. This institute keeps about 15 dif-

ferent data bases in the field of medecine.

2. Since 198o Informacijski center, Ljubljana, has been maintaining on-line connection with Lockheed/Information Systems, Palo Alto, USA, through TYMNET or TELENET communication network. Lockheed/Dialog keeps 15o different data bases, covering natural and technical sciences, social and human sciences and economy (SDI, retrospective information). Both centres give to specialized information centres in Slovenia SDI and retrospective information from the above mentioned two centres in Köln and Palo Alto.

According to the Self-management Agreement on Referral Activity in Yugoslavia, there is a referral centre at the National and University Library in Ljubljana, which will gradually introduce automation to the referral centre regarding the management and keeping of data bases, information instruments and service of the communication in the network. The National and University Library cooperates also with other university libraries which have developed instruments for referral information about published sources of information, about unpublished sources of information available to public, about organisations as the sources of information and about individual profiles (scientists, specialists etc.) as the sources of information for their special scientific field. There are also some data bases in the form of magnetic tapes:

2.1.3. DATA BASE FOR REFERAL INFORMATION IN SLOVENIA

DATA BASE	ORGANISATION WHICH PROCESSES DATA BASES	COMPUTER DATA BASE SERVICES
FOREIGN SERIALS IN THE LIBRARIES OF SLOVENIA	Inštitut za nuklearne nauke Boris Kidrič (=IBK) Vinča-Beograd Srbije, Beograd	RP
RESEARCH WORK (SAIDC)	NUK	SDI, RP
RE-UNION CATALOGUE OF SERIALS IN THE FIELD OF NATURAL SCIENCES AND TECHNOLOGY IN THE LIBRARIES OF SLOVENIA	CTK	CATALOGUES, INDICES
GUIDE-DATA BASE ON INDOK SERVICES AND SPECIAL LIBRARIES IN YUGOSLAVIA	IBK, Vinča, Beograd CTK-sodelovanje za SR Slovenijo	RP

DATA BASE	ORGANISATION WHICH PROCESSES DATA BASES	COMPUTER DATA BASE SERVICES
GUIDE-DATA BASE ON PUBLIC LIBRARIES IN SLOVENIA	IBK, Vinča, Beograd NUK-sodelovanje za SR Slovenijo	RP
REGISTER OF RESEARCHERS IN SLOVENIA	Informacijski center, Ljubljana	RP

The National Library has as a referral centre for science, also created or purchased important handbooks in order to give information in all fields of knowledge, especially union catalogues of monographs and serials, in the form of cards and books, biographies and bibliographies of university profesors, scientists, guides to the libraries etc.
The same was performed by the Central Technical Library in the field of natural sciences and technology, the Central Mecicine Library in the field of biomedicine etc.

It is evident that Slovenia has already developed an efficient system of scientific information which enables the user to be informed about the latest achievements in all fields of knowledge in Yugoslavia and abroad, as well as about past results.
It must also be pointed out that [15] documentalists showed at the beginning of automation, about 1969, greater understanding for a new discipline they also founded the first Yugoslav system for automation of information-documentation centres (SAIDC). They also succeeded in acquiring financial means for its realization. The development of informatics was also encouraged by the regulations in the field of the research work: [16] the Law of the Research Activity and Research Councils includes among the tasks of a research organisation also the organisation of informatics and its inclusion in a system. One of the conditions, necessary for the working organisation to be listed among research organisations is also regulated organisation of documentation.[17] Especially stimulating are the regulations: [18] Instructions for information-documentation activity in research organisations, which enumerates among up to date tasks of the activity entering secondary documents in to the common date base of a certain specialized information centre.

The Social Plan of Yugoslavia for the period from 1981 to 1985 [19]

quotes a system by the means of which it will be possible to accompany the development of science and technology at home and abroad.

The system will be established by the Republic Research Council in collaboration with the Chamber of Commerce and other republics. The Chamber of Commerce also included in the social system of information in particular of informatics in order to establish a mechanism for coordinated common work and to connect these information systems which already exist in Yugoslavia as well as in Slovenia, a mechanism for animating the users to make use of the information.

Although the development in the field of scientific information is far from being optimum, (equipment, staff ets.) it is evident that libraries were less successful in including automation to all the phases (loan, interlibrary loan, purchase of literature), few of them have created data base of primary documents. Fortunately, Slovenia is provided with computer processed union catalogue of serials and fairly good classical union catalogues of monographs and serials.

As soon as the user gets SDI information and retrospective inquiries connected with a specific theme, he decides upon the primary documents he is going to borrow from the library, especially from the library possessing a great number of documents (NUK, CTK, UKM, CMK, Central Economic Library (CEK) and corresponding union catalogues as well as the developed up-to-date interlibrary loan of documents from the centres at home and abroad.

3. MODERN COORDINATING PROCESSES OF SLOVENE LIBRARIES WHICH ENABLE ACCESSIBILITY TO SCIENTIFIC DOCUMENTS

Detailed analyse of the coordination of the purchase of literature [29] has shown, that the initial development of the coordination has developed, by the means of on-line bibliographic networks in the world, into general cooperation, being related to the purchase, bibliographic control and cooperative storage of documents. However, before establishig the entire on-line network, we will be obliged to do a lot of things by hand, with the aid of classical union catalogues which unify the stock of many libraries.

3.1. In Slovenia the coordination of the purchase of literature is performed in larger scientific fields (for instance: science and technology, social sciences, biomedicine). The responsibility of coordination is divided among great university libraries

which coordinate the purchase in a group of related special libraries. At the same time they agree upon including the bibliographic data in the union catalogues.

3.2

The coordination of the purchase of the literature can not be realized without union catalogues . Union catalogues of serials and monographs are fairly good thanks to the two laws on the libraries, in 1961 and 1965 [21)]

3.3

which have introduced methodological centres on republic and communal level. The proposition of the law of the librarianship, which will most probably be accepted by the Slovene Assembly this year, has also kept the regulation about the methodological centres and has sistematically performed the interconnection between the scientific information system and library information system too. The methodological centre on republic level at CTK helped the university and special technical libraries in Slovenia in their professional work and organisation . According to a such professional help technical libraries could include the bibliografic data of their monographs and serials in union catalogues. The priority of the libraries coordinating in the purchase of literature is determined according to the availability of their stock to all the users. The coordination of the purchase of the literature is well performed by four circles:

1. in the field of human sciences at The National and University Library in Ljubljana

2. in the field of science and technology at the Central Technical Library in Ljubljana

3. in the field of biomedicine at the Central Medicine Library in Ljubljana

4. University Library in Maribor for Maribor area

COORDINATION OF FOREIGN SERIALS IN SLOVENIA IN 1981

3.4

Interlibrary loan from their own library stock, from the Slovene libraries and from interlibrary lending centres abroad is mostly performed by the following interlibrary lending centres in Slovenia:

1. NUK for literature of nations and nationalities in Yugoslavia and for literature for human sciences
2. CTK for science and technology
3. CMK for biomedicine

Interlibrary centres in Slovenia mediate foreign literature from well-known lending centres as i.e. British Library Lending Division, Boston Spa, Great Britain; GNTB, Moskva, ZSSR; NTIS, USA, etc.

Interlibrary loan in 1981

from the founds of the centre	%	from Yugoslav libraries	%	from foreign countries	%	total	%
1706	4,4	96	2,5	194	2,8	1996	4,1
24679	63,8	3.487	91,o	6.118	87,9	34284	69,3
12267	31,8	244	6,5	649	9,3	13160	26,6
38652	loo,o	3.827	loo,o	6.961	loo,o	49440	loo,o

Although the on-line bibliographic network is not yet completely built up in Slovenia, the coordination of the purchase of literature, union catalogues of serials and monographs and interlibrary loan, done by hand, represent an effective system and assure, together with automated special information centres, complete service to the users.

3.5 In Slovenia central university libraries organize education and training of students as users of scientific and technical information and do complete theoretical lectures on informatics/documentation at the university.

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0)Samoupravni sporazum za procesiranje naučno-tehničkih informacija. - Novosti iz specijalizovanih centara za procesiranje naučno-tehničkih informacija u SFRJ, julij 1977, br. 1, str. 3-4

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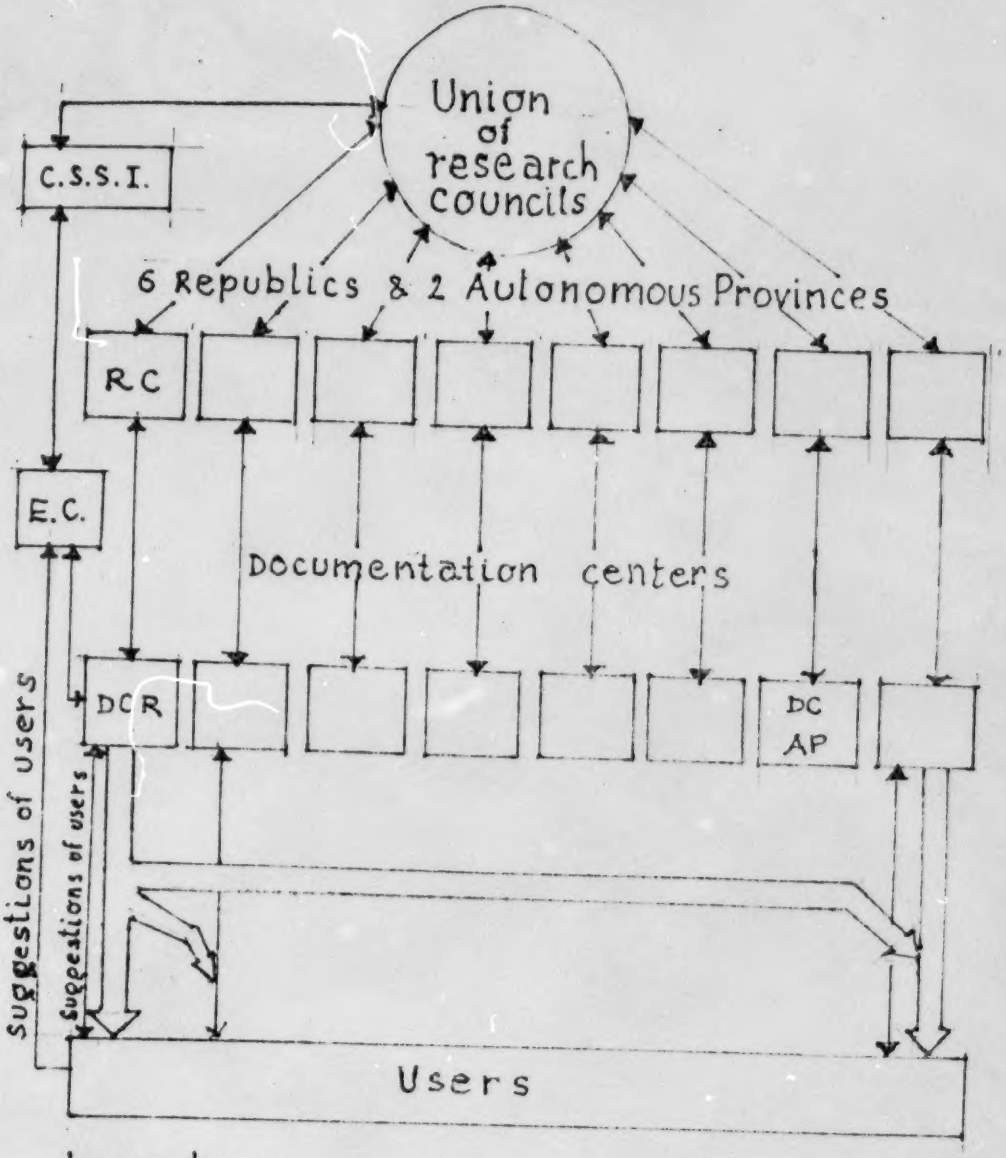
16)Zakon o raziskovalni dejavnosti in raziskovalnih skupnostih. - Uradni list SRS, 1979, št. 35
17)Pravilnik o razvidu raziskovalnih organizacij ter o postopku za vpis in izbris. - Uradni list SRS, 1980, št. 30
18)Navodilo o informacijsko-dokumentacijski dejavnosti v raziskovalni organizaciji. - Raziskovalec, 11/1981, št. 12, str. 678
19)Družbeni plan Socialistične republike Slovenije za obdobje 1981, št. 12
20)Šlajpah, M.: Koordinacija nabave dokumentov (z modelom nabave v SR Sloveniji). - 8. savjetovanje o naučnim i stručnim publikacijama, Zagreb, 14. 10. - 15. 10. 1981
21)Zakon o spremembah in dopolnitvah zakona o knjižnicah. - Uradni list, SRS, 1965, št. 11

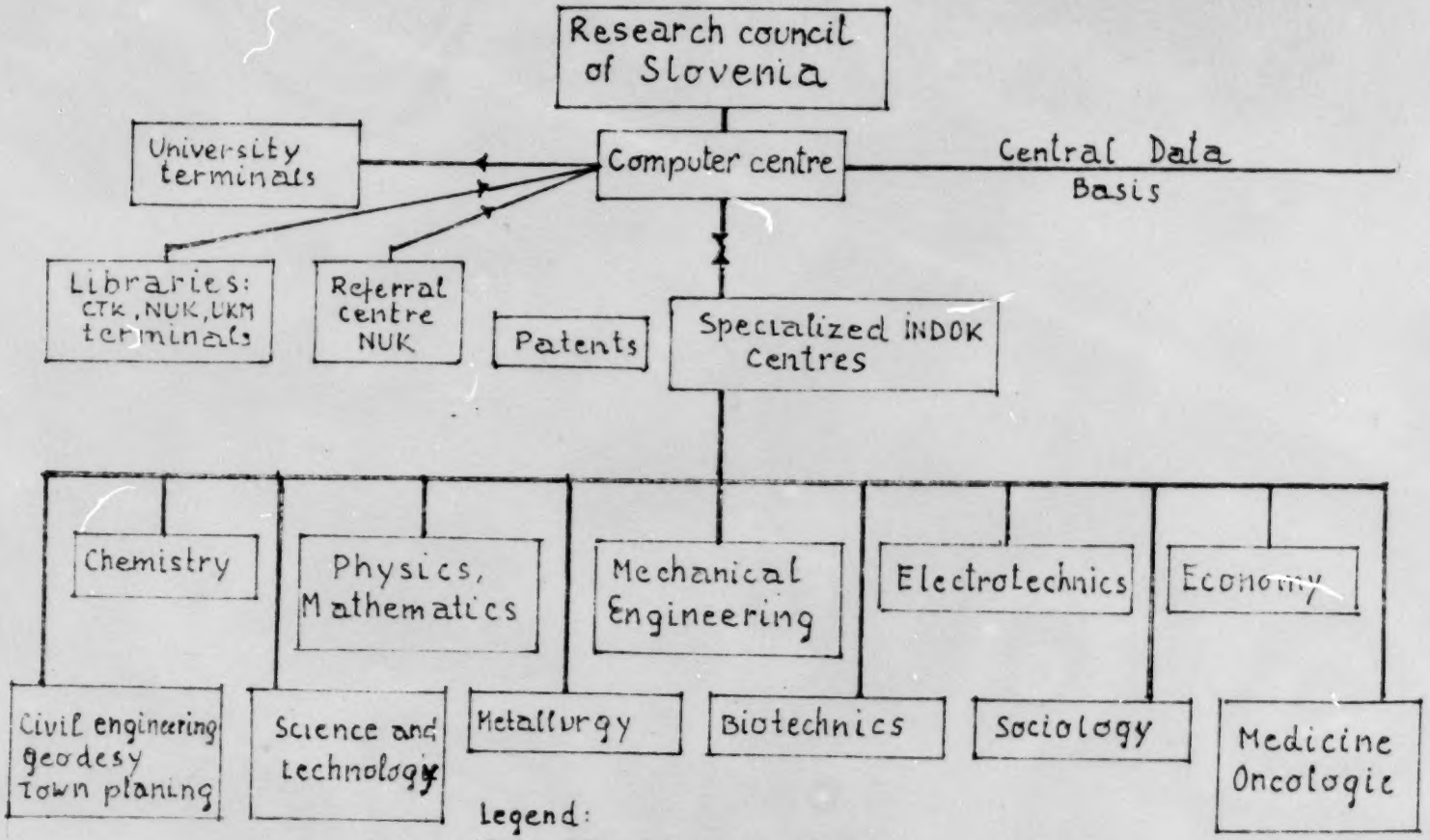
System of scientific and technical Information of SFRY



Legend:

RC: Research Council
CSSI: Commission of the system of Scientific Information
EC: Executive Committe
DCR, DCAP: Documentation Center of the Republic or Autonomous Province

Information centres' network of Slovenia



Legend:
CTK - Central Technical Library
NUK - National and University Library
UKM - University Library in Maribor

réseaux
48e conférence générale de l'IFLA – Montréal
22-28 août 1982
Fédération internationale des associations
de bibliothécaires et des bibliothèques

networks
48th IFLA General Conference – Montréal
August 22-28, 1982
International Federation of Library
Associations and Institutions

IFLA GENERAL CONFERENCE, MONTREAL 1982

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CISTI: Scientific and technical information services in Canada

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and Technical Information
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Presented at the "Lecture Program of IFLA's
Section of Science and Technology Libraries"
Montreal, August 1982

Meeting
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CISTI: Scientific and technical information services in Canada

Being the Canadian speaker in this "Lecture Programme of IFLA's Section of Science and Technology Libraries" provides me with a splendid opportunity to say a cordial "Welcome" to participating colleagues from other member countries of the Federation. Let me wish you a very pleasant and also professionally fruitful stay in our country and in the host city of Montreal, so well known for its beauty, charm and hospitality.

During this session, speakers from various countries introduce their national organizations responsible for STI. In my role I shall present to you the Canada Institute for Scientific and Technical Information - CISTI for short. This being an introduction, for which only 20 minutes are available, I will very briefly describe to you CISTI; its setting in the national environment and its present functions.

Last year Canada spent 1.07% of its Gross National Product on research and development. The largest share of this 3 1/2 billion dollar investment in the future came from industry; the second largest contributor was the federal government.

FEDERAL EXPENDITURES FOR SCIENTIFIC AND TECHNOLOGICAL INFORMATION

1981

GROSS NATIONAL PRODUCT (GNP).		$ 328,500 million
RESEARCH AND DEVELOPMENT (R&D)		
FEDERAL SHARE . . .	$ 1,254 mill.	
PROVINCIAL.	213	
INDUSTRIAL.	1,481	
UNIVERSITY.	387	
OTHER	183	3,518 million

R&D 1.07% of GNP

FEDERAL GOVERNMENT'S SHARE OF R&D EXPENDITURES:	$ 1,254 million
FEDERAL EXPENDITURES FOR SCIENTIFIC AND TECHNICAL INFORMATION (STI) IN 1981/82 . .	87.03

STI 6.94% of R&D (FEDERAL)

In the last fiscal year the government spent over 87 million dollars on maintaining scientific and technical information services in the Canadian public sector.

This amount increased by 19.4% to 103.9 million dollars in the current fiscal year and was distributed among departments and agencies in the various fields of the natural sciences and technology.

FEDERAL EXPENDITURES FOR
SCIENTIFIC AND TECHNICAL INFORMATION

NATURAL SCIENCES

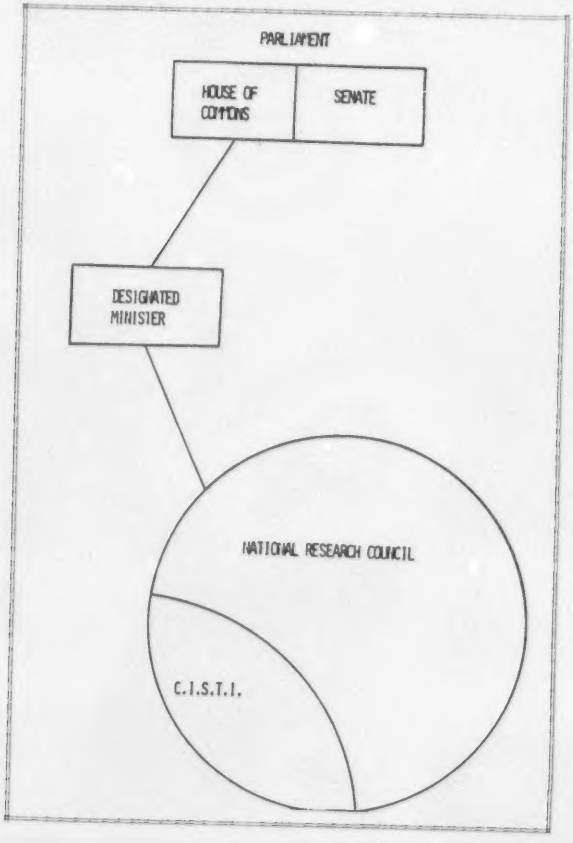
DEPARTMENT-AGENCY	1982-83 ($ MILLIONS)
NRC	27.1
ENV	17.2
CCA	14.8
EMR	11.2
F&O	9.7
AG	6.4
OTHERS	17.5
TOTAL	103.9

The following departments and agencies of the federal government have mandated responsibilities to perform or promote scientific and technical activities in support of national socio-economic objectives.

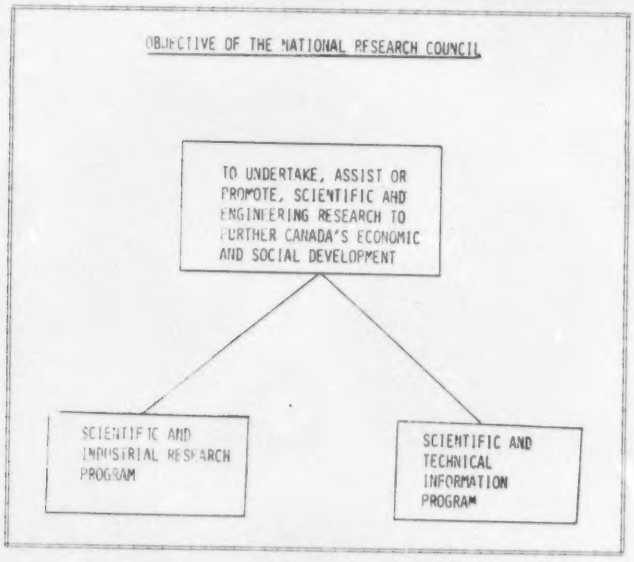
GOVERNMENT OF CANADA
DEPARTMENTS AND AGENCIES
WITH A
SCIENCE ORIENTATION

DEPARTMENTS	AGENCIES
AGRICULTURE	ATOMIC ENERGY
COMMUNICATIONS	MEDICAL RESEARCH COUNCIL
ENERGY, MINES AND RESOURCES	NATIONAL RESEARCH COUNCIL
ENVIRONMENT	NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL
FISHERIES AND OCEANS	SCIENCE COUNCIL
HEALTH AND WELFARE	MINISTRY OF STATE FOR SCIENCE AND TECHNOLOGY
INDUSTRY, TRADE AND COMMERCE	
NATIONAL DEFENCE	
TRANSPORT	

CISTI is a division of the country's leading research organization, the National Research Council of Canada.



The tasks of NRC are carried out in two major programs:


OBJECTIVE OF THE NATIONAL RESEARCH COUNCIL
TO UNDERTAKE, ASSIST OR PROMOTE, SCIENTIFIC AND ENGINEERING RESEARCH TO FURTHER CANADA'S ECONOMIC AND SOCIAL DEVELOPMENT
SCIENTIFIC AND INDUSTRIAL RESEARCH PROGRAM
SCIENTIFIC AND TECHNICAL INFORMATION PROGRAM

The Scientific and Industrial Research Program is based primarily in NRC's laboratory divisions.

SCIENTIFIC AND INDUSTRIAL RESEARCH PROGRAM

OBJECTIVE

To create, acquire, and promote the application of scientific and engineering knowledge to meet Canadian needs for economic, regional and social development.

The main element of the STI Program is the Canada Institute for Scientific and Technical Information.

SCIENTIFIC AND TECHNICAL INFORMATION PROGRAM

OBJECTIVE

TO PROMOTE AND PROVIDE FOR THE USE OF SCIENTIFIC AND TECHNICAL INFORMATION BY THE PEOPLE AND GOVERNMENT OF CANADA TO MEET CANADIAN NEEDS FOR ECONOMIC, REGIONAL AND SOCIAL DEVELOPMENT.

The many tasks of CISTI are clustered in these sub-objectives:

SUB-OBJECTIVES

- TO DEVELOP AND MAINTAIN A NATIONAL RESOURCE IN SCIENTIFIC AND TECHNICAL INFORMATION THAT CAN RESPOND TO NATIONAL NEEDS AND PRIORITIES;
- TO PROVIDE AND MAINTAIN SERVICES ASSOCIATED WITH SCIENTIFIC AND TECHNICAL INFORMATION TO MEET THE NEEDS OF THE PEOPLE AND GOVERNMENT OF CANADA;
- TO CO-ORDINATE THE RESOURCES OF THE NATIONAL RESEARCH COUNCIL WITH THOSE OF OTHER INFORMATION TRANSFER INSTITUTIONS BOTH NATIONAL AND INTERNATIONAL AND TO PARTICIPATE IN THE DEVELOPMENT AND MAINTENANCE OF SCIENTIFIC AND TECHNICAL INFORMATION NETWORKS;
- TO PROVIDE AND MAINTAIN A CAPABILITY TO CARRY OUT RESEARCH INTO THE NEED FOR AND METHODS OF ACCOMPLISHING THE TRANSFER OF SCIENTIFIC AND TECHNICAL INFORMATION IN RESPONSE TO USER NEEDS.

Three dates and three names contain the long history, 58 years of development, of our organization.

1924 - LIBRARY OF THE NATIONAL RESEARCH COUNCIL

1966 - NATIONAL SCIENCE LIBRARY OF CANADA

1974 - CANADA INSTITUTE FOR SCIENTIFIC AND TECHNICAL INFORMATION

One achievement each year since 1968. The following selective list illustrates the continuous development of our services:

HIGHLIGHTS OF SERVICES - 1968-1981

1968 - HEALTH SCIENCES RESOURCE CENTRE ESTABLISHED
1969 - CAN/SDI, THE NATIONAL CURRENT AWARENESS SERVICE, STARTS
1970 - INTRODUCING MEDLARS IN CANADA
1971 - INFORMATION EXCHANGE CENTRE STARTS OPERATION
1972 - ORGANIZATION OF THE PUBLICATION SECTION
1973 - 36-HOUR SERVICE FOR ILL
1974 - STARTING CAN/OLE, THE NATIONAL ON-LINE SYSTEM
1975 - KNOWLEDGE SOURCE INDEX STARTS FOR REFERRAL
1976 - DOBIS, A JOINT NATIONAL LIBRARY/CISTI PROJECT IS LAUNCHED
1977 - AUTOMATIC ORDERING FACILITY ADDED TO CAN/OLE
1978 - ON-LINE ACCESS TO CISTI'S HOLDINGS
1979 - NEW BRANCHES OPENED IN VICTORIA AND MONTREAL
1980 - BULK DELIVERY TO CANADIAN CITIES INTRODUCED
1981 - SCIENTIFIC NUMERIC DATA BASES SERVICES OFFERED

CISTI's collection is the largest holding of scientific, technical and biomedical literature in Canada.

THE CISTI COLLECTION - APRIL 1982

SERIAL TITLES	33,642
BOOK TITLES	302,000
MICROFICHE TITLES	1,550,000

Beyond the inflow of subscribed serial titles, CISTI obtains scientific and technical literature -- mainly report material that is not available via other channels -- by exchange. CISTI has exchange agreements with more than 70 countries.

CISTI Exchanges

Argentina
Australia
Austria
Bangladesh
Belgium
Brazil
Bulgaria
Burma
Chile
China (P.R.)
Colombia
Costa Rica
Cuba
Czechoslovakia
Denmark
Equador
Egypt
Ethiopia
Finland
France
Germany (FRG)
Germany (GDR)
Ghana
Greece
Hungary
Iceland
India
Indonesia
Iraq
Ireland
Israel
Italy
Jamaica
Japan
Jordan
Korea (S)
Korea (N)
Kuwait
Malaysia
Mexico
Netherlands
New Zealand
Nigeria
Norway
Pakistan
Peru
Philippines
Poland
Portugal
Romania
Saudi Arabia
Senegal
South Africa
Spain
Sri Lanka
Sweden
Switzerland
Taiwan
Thailand
Trinidad
Tunisia
Turkey
United Kingdom
U.S.A.
Uruguay
U.S.S.R.
Venezuela
Yugoslavia
Zaire
Zimbabwe

The collection is used extensively, usage figures growing by more than 10% from year to year.

COLLECTION USAGE 1981/82

LENDING SERVICES

ILL REQUESTS		197,930
SUPPLIED BY CISTI	73.4%	
LOCATION SUPPLIED	15.2%	
INFORMATION SUPPLIED	7.5%	
NO LOCATION FOUND	3.2%	
NOT IDENTIFIABLE	0.7%	
	100.0%	

CIRCULATION

LOANS	22,560
PHOTOCOPIES/MICROFICHE	41,584

THE CLIENTELE

INDUSTRY	43.7%
GOVERNMENT	34.7%
UNIVERSITY	21.6%
	100.0%

The following table indicates a number of other client services, with round figures indicating their use in 1980/81.

ON-LINE SEARCHING - CAN/OLE	436 CENTRES
AUTOMATIC ORDERING - CAN/DOC	35,397 ORDERS
ALERTING SERVICE - CAN/SDI	2,323 SUBSCRIBERS
MEDLINE - HSAC	152 CENTRES
REFERENCE - ULSS	830 EXTENSIVE SEARCHES
TRANSLATION INDEX	6,967 SEARCHES

SCIENTIFIC NUMERIC DATA BASES (SND) - IN MARKETING STAGE

All these figures refer to 1981/82 and in several service areas they have considerably increased since 1980/81. An example: the number of MEDLINE centres grew to 152 in the last year.

I said at the beginning that my presentation would only be a brief introduction, condensed into a 20-minute time frame. I have tried to sketch out the contours of CISTI and at the end, unfortunately, I must put only in a few words a very special characteristic of the organization which would deserve another 20 minutes to describe. This is our human resource base: the talent, devotion and ideas of some 230 people whom we proudly call: the CISTI family.